

**Nonlinear guided waves: Preface**

Assanto, G. &amp; Smyth, N. F., 1 Dec 2016, In : Journal of Nonlinear Optical Physics and Materials. 25, 4, 1650041.

Research output: Contribution to journal &gt; Article &gt; Scientific

**0.6V threshold voltage thin film transistors with solution processable indium oxide ( $\text{In}_2\text{O}_3$ ) Channel and Anodized High-k  $\text{Al}_2\text{O}_3$  Dielectric**

Bhalerao, S. R., Lupo, D., Zangiabadi, A., Kymmissis, I., Leppäniemi, J., Alastalo, A. &amp; Berger, P. R., 1 Jul 2019, In : IEEE Electron Device Letters. 40, 7, p. 1112-1115 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**10 kA Joints for HTS Roebel Cables**

Murto maeki, J. S., Kirby, G., van Nugteren, J., Contat, P. A., Fleiter, J., De Frutos, O. S., Pincot, F. O., DeRijk, G., Rossi, L., Ruuskanen, J., Stenvall, A. &amp; Wolf, F., 2018, In : IEEE Transactions on Applied Superconductivity. 28, 3

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**3-D mechanical modeling of 20 T HTS clover leaf end coils - Good practices and lessons learned**

Murto maki, J. S., Van Nugteren, J., Stenvall, A., Kirby, G. &amp; Rossi, L., 1 Aug 2019, In : IEEE Transactions on Applied Superconductivity. 29, 5, 8642381.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**3-D Numerical Modeling of AC Losses in Multifilamentary MgB<sub>2</sub> Wires**

Escamez, G., Sirois, F., Lahtinen, V., Stenvall, A., Badel, A., Tixador, P., Ramdane, B., Meunier, G., Perrin-Bit, R. &amp; Bruzek, C. E., 1 Apr 2016, In : IEEE Transactions on Applied Superconductivity. 26, 3, 4701907.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**3GPP LTE-assisted Wi-Fi-direct: Trial implementation of live D2D technology**

Pyattaev, A., Hosek, J., Johnsson, K., Krkos, R., Gerasimenko, M., Masek, P., Ometov, A., Andreev, S., Sedy, J., Novotny, V. &amp; Koucheryavy, Y., 1 Oct 2015, In : ETRI Journal. 37, 5, p. 877-887 11 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**A 0.5-6MHz Active-RC LPF with Fine Gain Steps Using Binary Interpolated Resistor Banks**

Beck, S., Jeong, S., Min, S., Hwang, M. W., Kim, S. T., Lim, K. &amp; Tentzeris, E. M., Aug 2011, In : IEICE TRANSACTIONS ON ELECTRONICS. E94-C, 8, p. 1328-1331 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Absorption profile and femtosecond intraband relaxation of the intense upper Davydov component in oligothiophenes**

Petelenz, P. &amp; Kulig, W., Feb 2011, In : Physica Status Solidi B: Basic Solid State Physics. 248, 2, p. 412-415 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Accelerator-quality HTS dipole magnet demonstrator designs for the EuCARD-2 5-T 40-mm clear aperture magnet**

Kirby, G. A., Van Nugteren, J., Ballarino, A., Bottura, L., Chouika, N., Clement, S., Datskov, V., Fajardo, L., Fleiter, J., Gauthier, R., Gentini, L., Lambert, L., Lopes, M., Perez, J. C., De Rijk, G., Rijllart, A., Rossi, L., Ten Kate, H., Durante, M., Fazilleau, P., Lorin, C., Häro, E., Stenvall, A., Caspi, S., Marchevsky, M., Goldacker, W. &amp; Kario, A., 1 Jun 2015, In : IEEE Transactions on Applied Superconductivity. 25, 3, 4000805.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Adaptive multiresolution method for MAP reconstruction in electron tomography**

Acar, E., Peltonen, S. &amp; Ruotsalainen, U., 1 Nov 2016, In : Ultramicroscopy. 170, p. 24-34 11 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**A Database for Storing Magnet Parameters and Analysis of Quench Test Results in HL-LHC Nb<sub>3</sub>Sn Short Model Magnets**

Salmi, T., Tarhisaari, T. &amp; Izquierdo-Bermudez, S., 2020, In : IEEE Transactions on Applied Superconductivity. 30, 4, 5 p., 4703705.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Adsorption and dissociation of molecular oxygen on  $\alpha$ -Pu (0 2 0) surface: A density functional study**Wang, J. & Ray, A. K., 1 Sep 2011, In : *Physica B: Condensed Matter*. 406, 17, p. 3285-3294 10 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**A Fast Quench Protection System for High-Temperature Superconducting Magnets**van Nugteren, J., Murtomäki, J., Ruuskanen, J., Kirby, G., Hagen, P., DeRijk, G., Ten Kate, H., Bottura, L. & Rossi, L., Jan 2019, In : *IEEE Transactions on Applied Superconductivity*. 29, 1, 4700108.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**A Finite Element Simulation Tool for Predicting Hysteresis Losses in Superconductors Using an H-Oriented Formulation with Cohomology Basis Functions**Lahtinen, V., Stenvall, A., Sirois, F. & Pellikka, M., 22 Apr 2015, In : *Journal of Superconductivity and Novel Magnetism*. 28, 8, p. 2345-2354 10 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**AlGaAs/AlGaNp VECSELs with Direct Emission at 740-770 nm**Nechay, K., Kahle, H., Penttinen, J-P., Rajala, P., Tukiainen, A., Ranta, S. & Guina, M., 1 Aug 2019, In : *IEEE Photonics Technology Letters*. 31, 15, p. 1245-1248 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Ambient-Pressure XPS Study of a Ni-Fe Electrocatalyst for the Oxygen Evolution Reaction**Ali-Löytty, H., Louie, M. W., Singh, M. R., Li, L., Sanchez Casalongue, H. G., Ogasawara, H., Crumlin, E. J., Liu, Z., Bell, A. T., Nilsson, A. & Friebel, D., 4 Feb 2016, In : *Journal of Physical Chemistry C*. 120, 4, p. 2247-2253 7 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**An ab initio study of  $\text{PuO}_{2\pm 0.25}$ ,  $\text{UO}_{2\pm 0.25}$ , and  $\text{U0.5Pu0.5O}_{2\pm 0.25}$** Ma, L. & Ray, A. K., May 2011, In : *European Physical Journal B*. 81, 1, p. 103-113 11 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Analysis of uncertainties in protection heater delay time measurements and simulations in Nb3Sn high-field accelerator magnets**Salmi, T., Chlachidze, G., Marchevsky, M., Bajas, H., Felice, H. & Stenvall, A., 1 Aug 2015, In : *IEEE Transactions on Applied Superconductivity*. 25, 4

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Analytical and Numerical Methods to Estimate the Effective Mechanical Properties of Rutherford Cables**Zhao, J., Stenvall, A., Gao, Y. & Salmi, T., 1 Aug 2020, In : *IEEE Transactions on Applied Superconductivity*. 30, 5, 8400808.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Analytical computation of the demagnetizing energy of thin-film domain walls**Skaugen, A., Murray, P. & Laurson, L., 25 Sep 2019, In : *Physical Review B*. 100, 9, 094440.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**A near-infrared optoelectronic approach to detection of road conditions**Colace, L., Santoni, F. & Assanto, G., May 2013, In : *Optics and Lasers in Engineering*. 51, 5, p. 633-636 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**A new power-consumption optimization technique for two-stage operational amplifiers**Beck, S., Kim, S. T., Lee, M., Lim, K., Laskar, J. & Tentzeris, M. M., Jun 2011, In : *IEICE TRANSACTIONS ON ELECTRONICS*. E94-C, 6, p. 1138-1140 3 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**An integrated "sense-and-communicate" broad-/narrow-band optically controlled reconfigurable antenna for cognitive radio systems**Liu, X., Fan, Y. & Tentzeris, M. M., 1 Apr 2015, In : *Microwave and Optical Technology Letters*. 57, 4, p. 1016-1023 8 p.

**Anisotropic and strain-dependent model of magnetostriction in electrical steel sheets**

Belahcen, A., Singh, D., Rasilo, P., Martin, F., Ghalamestani, S. G. & Vandervelde, L., 1 Mar 2015, In : IEEE Transactions on Magnetics. 51, 3, 2001204.

Research output: Contribution to journal > Article > Scientific > peer-review

**An Optical Sensor for Volatile Amines Based on an Inkjet-Printed, Hydrogen-Bonded, Cholesteric Liquid Crystalline Film**

Stumpel, J. E., Wouters, C., Herzer, N., Ziegler, J., Broer, D. J., Bastiaansen, C. W. M. & Schenning, A. P. H. J., 2014, In : Advanced Optical Materials. 2, 5, p. 459-464 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**A Novel Enhanced-Performance Flexible RFID-Enabled Embroidered Wireless Integrated Module for Sensing Applications**

Hasani, M., Vena, A., Sydänheimo, L., Tentzeris, M. M. & Ukkonen, L., 2015, In : IEEE Transactions on Components, Packaging and Manufacturing Technology. 5, 9, p. 1244-1252 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Architectures and codecs for real-time light field streaming**

Kovács, P. T., Zare, A., Balogh, T., Bregovic, R. & Gotchev, A., 1 Jan 2017, In : Journal of Imaging Science and Technology. 61, 1, 010403.

Research output: Contribution to journal > Article > Scientific > peer-review

**Are coarse-grained models apt to detect protein thermal stability? the case of OPEP force field**

Kalimeri, M., Derreumaux, P. & Sterpone, F., 1 Jan 2015, In : Journal of Non-Crystalline Solids. 407, p. 494-501 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Aryl end-capped quaterthiophenes applied as anode interfacial layers in inverted organic solar cells**

Heiskanen, J. P., Manninen, V. M., Pankov, D., Omar, W. A. E., Kastinen, T., Hukka, T. I., Lemmetyinen, H. J. & Hormi, O. E. O., 1 Jan 2015, In : Thin Solid Films. 574, p. 196-206 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**A study of electric transport in n- and p-type modulation-doped GaInNAs/GaAs quantum well structures under a high electric field**

Sarcan, F., Mutlu, S., Cokduyguilar, E., Donmez, O., Erol, A., Puustinen, J. & Guina, M., 4 May 2018, In : Semiconductor Science and Technology. 33, 6, 064003.

Research output: Contribution to journal > Article > Scientific > peer-review

**Better understanding of the role of  $\text{SiO}_2$ ,  $\text{P}_2\text{O}_5$  and  $\text{Al}_2\text{O}_3$  on the spectroscopic properties of  $\text{Yb}^{3+}$  doped silica sol-gel glasses**

Glorieux, B., Salminen, T., Massera, J., Lastusaari, M. & Petit, L., 2018, In : Journal of Non-Crystalline Solids. 482, p. 46-51

Research output: Contribution to journal > Article > Scientific > peer-review

**Block copolymer lithography: Feature size control and extension by an over-etch technique**

Rasappa, S., Borah, D., Senthamaraiyan, R., Faulkner, C. C., Shaw, M. T., Gleeson, P., Holmes, J. D. & Morris, M. A., 1 Nov 2012, In : Thin Solid Films. 522, p. 318-323 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Boron delta-doping dependence on Si/SiGe resonant interband tunneling diodes grown by chemical vapor deposition**

Ramesh, A., Growden, T. A., Berger, P. R., Loo, R., Vandervorst, W., Douhard, B. & Caymax, M., Mar 2012, In : IEEE Transactions on Electron Devices. 59, 3, p. 602-609 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Bringing High-Performance GaInNAsSb/GaAs SOAs to True Data Applications**

Giannoulis, G., Korpijärvi, V.-M., Iliadis, N., Mäkelä, J., Viheriälä, J., Apostolopoulos, D., Guina, M. & Avramopoulos, H., 15 Aug 2015, In : IEEE Photonics Technology Letters. 27, 16, p. 1691-1694 4 p., 7113825.

Research output: Contribution to journal > Article > Scientific > peer-review

**Broadband finite-Difference Time-Domain modeling of plasmonic organic photovoltaics**

Jung, K. Y., Yoon, W. J., Park, Y. B., Berger, P. R. & Teixeira, F. L., 2014, In : ETRI Journal. 36, 4, p. 654-661 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Bursty magnetic friction between polycrystalline thin films with domain walls**

Rissanen, I. & Laurson, L., 4 Oct 2019, In : Physical Review B. 100, 14, 9 p., 144408.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Calculated electronic density of states and structural properties of tetrahedral amorphous carbon**

Koivusaari, K. J., Rantala, T. T. & Leppävuori, S., Apr 2000, In : Diamond and Related Materials. 9, 3, p. 736-740 5 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Calculation of the scalar diffraction field from curved surfaces by decomposing the three-dimensional field into a sum of Gaussian beams**

Şahin, E. & Onural, L., 2013, In : Journal of the Optical Society of America A: Optics Image Science and Vision. 30, 3, p. 527-536 10 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Capability assessment of inkjet printing for reliable RFID applications**

Putala, J., Niittynen, J., Hannu, J., Myllymäki, S., Kunnari, E., Mäntysalo, M., Hagberg, J. & Jantunen, H., 1 Jun 2017, In : IEEE Transactions on Device and Materials Reliability. 17, 2, p. 281-290 10 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Cascaded crystalline raman lasers for extended wavelength coverage: Continuous-wave, third-stokes operation**

Casula, R., Penttinen, J-P., Guina, M., Kemp, A. J. & Hastie, J. E., 20 Nov 2018, In : Optica. 5, 11, p. 1406-1413 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Catalytic Activity of AuCu Clusters on MgO(100): Effect of Alloy Composition for CO Oxidation**

Ma, L., Laasonen, K. & Akola, J., 25 May 2017, In : Journal of Physical Chemistry C. 121, 20, p. 10876-10886 11 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Cavity formation in split ring resonators**

Caglayan, H., Bulu, I., Loncar, M. & Ozbay, E., Dec 2008, In : Photonics and Nanostructures - Fundamentals and Applications. 6, 3-4, p. 200-204 5 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Chip-by-chip configurable interconnection using digital printing techniques**

Mashayekhi, M., Winchester, L., Laurila, M-M., Mäntysalo, M., Ogier, S., Terés, L. & Carrabina, J., 6 Mar 2017, In : Journal of Micromechanics and Microengineering. 27, 4, 045009.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Cold test results of the LARP HQ Nb<sub>3</sub>Sn quadrupole magnet at 1.9 K**

Bajas, H., Ambrosio, G., Anerella, M., Bajko, M., Bossert, R., Caspi, S., Chiuchiolo, A., Chlachidze, G., Dietderich, D., Dunkel, O., Felice, H., Ferracin, P., Feuvrier, J., Fiscarelli, L., Ghosh, A., Giloux, C., Godeke, A., Hafalia, A. R., Marchevsky, M., Russenschuck, S., Sabbi, G. L., Salmi, T., Schmalzle, J., Todesco, E., Wanderer, P., Wang, X. & Yu, M., 2013, In : IEEE Transactions on Applied Superconductivity. 23, 3, 4002606.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Combination of E-jet and inkjet printing for additive fabrication of multilayer high-density RDL of silicon interposer**

Laurila, M-M., Khorramdel, B. & Mäntysalo, M., 1 Mar 2017, In : IEEE Transactions on Electron Devices. 64, 3, p. 1217-1224 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Comparative Analysis of Injection Microdisk Lasers Based on InGaAsN Quantum Wells and InAs/InGaAs Quantum Dots**

Moiseev, E. I., Maximov, M. V., Kryzhanovskaya, N. V., Simchuk, O. I., Kulagina, M. M., Kadinskaya, S. A., Guina, M. & Zhukov, A. E., 1 Feb 2020, In : Semiconductors. 54, 2, p. 263-267 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Comparison of the optical, thermal and structural properties of Ge-Sb-S thin films deposited using thermal evaporation and pulsed laser deposition techniques**

Musgraves, J. D., Carlie, N., Hu, J., Petit, L., Agarwal, A., Kimerling, L. C. & Richardson, K. A., Jul 2011, In : Acta Materialia. 59, 12, p. 5032-5039 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Comparison of three light doses in the photodynamic treatment of actinic keratosis using mathematical modeling**

Vignon-Dewalle, A. S., Betrouni, N., Tylcz, J. B., Vermandel, M., Mortier, L. & Mordon, S., 1 May 2015, In : JOURNAL OF BIOMEDICAL OPTICS. 20, 5, 058001.

Research output: Contribution to journal > Article > Scientific > peer-review

**Compatibilization of natural rubber/nitrile rubber blends by sol-gel nano-silica generated by in situ method**

Bansod, N. D., Kapgate, B. P., Das, C., Das, A., Basu, D. & Debnath, S. C., 2016, In : JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY. 80, 2, p. 548-559 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Composition dependent growth dynamics in molecular beam epitaxy of GaInNAs solar cells**

Aho, A., Polojärvi, V., Korpijärvi, V. M., Salmi, J., Tukiainen, A., Laukkanen, P. & Guina, M., May 2014, In : Solar Energy Materials and Solar Cells. 124, p. 150-158 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Computational super-resolution phase retrieval from multiple phase-coded diffraction patterns: Simulation study and experiments**

Katkovnik, V., Shevkunov, I., Petrov, N. V. & Egiazarian, K., 20 Jul 2017, In : Optica. 4, 7, p. 786-794 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Computation of torque of an electrical machine with different types of finite element mesh in the air gap**

Silwal, B., Rasilo, P., Perkkio, L., Oksman, M., Hannukainen, A., Eirola, T. & Arkkio, A., 1 Dec 2014, In : IEEE Transactions on Magnetics. 50, 12, 8105909.

Research output: Contribution to journal > Article > Scientific > peer-review

**Considerations on a Cost Model for High-Field Dipole Arc Magnets for FCC**

Schoerling, D., Durante, M., Lorin, C., Martinez, T., Ruuskanen, J., Salmi, T., Sorbi, M., Tommasini, D. & Toral, F., 1 Jun 2017, In : IEEE Transactions on Applied Superconductivity. 27, 4, 4003105.

Research output: Contribution to journal > Article > Scientific > peer-review

**Construction of an Interconnected Nanostructured Carbon Black Network: Development of Highly Stretchable and Robust Elastomeric Conductors**

Bhagavatheswaran, E. S., Parsekar, M., Das, A., Le, H. H., Wiessner, S., Stöckelhuber, K. W., Schmaucks, G. & Heinrich, G., 17 Sep 2015, In : Journal of Physical Chemistry C. 119, 37, p. 21723-21731 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Controlling the plasmon resonance via epsilon-near-zero multilayer metamaterials**

Habib, M., Briukhanova, D., Das, N., Yildiz, B. C. & Caglayan, H., 2020, In : Nanophotonics. 9, 11, 8 p., 20200245.

Research output: Contribution to journal > Article > Scientific > peer-review

**Crystallization of supercooled liquid antimony: A density functional study**

Ropo, M., Akola, J. & Jones, R. O., 3 Nov 2017, In : Physical Review B. 96, 18, 184102.

Research output: Contribution to journal > Article > Scientific > peer-review

**Crystallization processes in the phase change material Ge<sub>2</sub> Sb<sub>2</sub> Te<sub>5</sub>: Unbiased density functional/molecular dynamics simulations**

Kalikka, J., Akola, J. & Jones, R. O., 17 Oct 2016, In : Physical Review B. 94, 13, 134105.

Research output: Contribution to journal > Article > Scientific > peer-review

**Cysteine-tagged chimeric avidin forms high binding capacity layers directly on gold**

Vikholm-Lundin, I., Auer, S., Paakkunainen, M., Määttä, J. A. E., Munter, T., Leppiniemi, J., Hytönen, V. P. & Tappura, K., Aug 2012, In : Sensors and Actuators B: Chemical. 171-172, p. 440-448 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Decreasing the extremely low-frequency electric field exposure with a Faraday cage during work tasks from a man hoist at a 400 kV substation**

Pirkkalainen, H., Elovaara, J. & Korpinen, L., 2016, In : Progress In Electromagnetics Research M. 48, p. 55-66 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Deformation of lamellar γ-TiAl below the general yield stress**

Edwards, T. E. J., Di Gioacchino, F., Goodfellow, A. J., Mohanty, G., Wehrs, J., Michler, J. & Clegg, W. J., 15 Jan 2019, In : Acta Materialia. 163, p. 122-139 18 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Demonstration of optical nonlinearity in InGaAsP/InP passive waveguides**

Saeidi, S., Rasekh, P., Awan, K. M., Tügen, A., Huttunen, M. J. & Dolgaleva, K., 1 Oct 2018, In : Optical Materials. 84, p. 524-530 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Design, fabrication, and testing of a low AC-loss conduction-cooled cryostat for magnetization loss measurement apparatus**

Järvelä, J., Lyly, M., Stenvall, A., Juntunen, R., Souc, J. & Mikkonen, R., 1 Feb 2015, In : IEEE Transactions on Applied Superconductivity. 25, 1

Research output: Contribution to journal > Article > Scientific > peer-review

**Designing materials with desired electromagnetic properties**

Bulu, I., Caglayan, H. & Ozbay, E., Dec 2006, In : Microwave and Optical Technology Letters. 48, 12, p. 2611-2615 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Design of a Nb<sub>3</sub>Sn 400 T/m quadrupole for the Future Circular Collider**

Lorin, C., Simon, D., Felice, H., Rifflet, J. M., Salmi, T. & Schoerling, D., 2018, In : IEEE Transactions on Applied Superconductivity. 28, 3, 4004905.

Research output: Contribution to journal > Article > Scientific > peer-review

**Detection of 3,4-methylenedioxymethamphetamine (MDMA, ecstasy) by displacement of antibodies**

Vikholm-Lundin, I., Auer, S. & Hellgren, A. C., 10 Aug 2011, In : Sensors and Actuators B: Chemical. 156, 1, p. 28-34 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Determination of beam incidence conditions based on the analysis of laser interference patterns**

Wang, D., Wang, Z., Yue, Y., Yu, J., Tan, C., Li, D., Qiu, R. & Maple, C., 1 Nov 2015, In : Optik. 126, 21, p. 2902-2907 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Development of a new illumination procedure for photodynamic therapy of the abdominal cavity**

Cuyon, L., Lesage, J. C., Betrouni, N. & Mordon, S., Mar 2012, In : JOURNAL OF BIOMEDICAL OPTICS. 17, 3, 038001.

Research output: Contribution to journal > Article > Scientific > peer-review

**Development of MQXF: The Nb<sub>3</sub>Sn Low-β Quadrupole for the HiLumi LHC**

Ferracin, P., Ambrosio, G., Anerella, M., Ballarino, A., Bajas, H., Bajko, M., Bordini, B., Bossert, R., Cheng, D. W., Dietderich, D. R., Chlachidze, G., Cooley, L., Felice, H., Ghosh, A., Hafalia, R., Holik, E., Izquierdo Bermudez, S., Fessia, P., Grosclaude, P., Guinchard, M., Juchno, M., Krave, S., Lackner, F., Marchevsky, M., Marinozzi, V., Nobrega, F., Oberli, L., Pan, H., Perez, J. C., Prin, H., Rysti, J., Rochepault, E., Sabbi, G., Salmi, T., Schmalzle, J., Sorbi, M., Sequeira

Tavares, S., Todesco, E., Wanderer, P., Wang, X. & Yu, M., 1 Jun 2016, In : IEEE Transactions on Applied Superconductivity. 26, 4, 4000207.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Diffusion on aluminum-cluster surfaces and the cluster growth**

Valkealahti, S. & Manninen, M., 1 Jan 1998, In : Physical Review B - Condensed Matter and Materials Physics. 57, 24, p. 15533-15540 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Dilute nitride triple junction solar cells for space applications: Progress towards highest AM0 efficiency**

Aho, A., Isoaho, R., Tukiainen, A., Gori, G., Campesato, R. & Guina, M., Sep 2018, In : Progress in Photovoltaics: Research and Applications. 26, 19, p. 740-744 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Direct measurement of vapour-metal shifts in photo- and Auger electron spectra of Zn and Cd**

Kumpula, R., Vayrynen, J., Rantala, T. & Aksela, S., 1979, In : Journal of physics c-Solid state physics. 12, 21, 001.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Dissolution behavior of the bioactive glass S53P4 when sodium is replaced by potassium, and calcium with magnesium or strontium**

Hupa, L., Fagerlund, S., Massera, J. & Björkvik, L., 2016, In : Journal of Non-Crystalline Solids. p. 41-46 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Dynamics of photovoltaic-generator-interfacing voltage-controlled buck power stage**

Sitbon, M., Leppäaho, J., Suntio, T. & Kuperman, A., 1 Mar 2015, In : IEEE Journal of Photovoltaics. 5, 2, p. 633-640 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Dynamic speckle analysis with smoothed intensity-based activity maps**

Stoykova, E., Berberova, N., Kim, Y., Nazarova, D., Ivanov, B., Gotchev, A., Hong, J. & Kang, H., 1 Jun 2017, In : Optics and Lasers in Engineering. 93, p. 55-65 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Effect of heat-treatment on the upconversion of $\text{NaYF}_4:\text{Yb}^{3+}, \text{Er}^{3+}$ nanocrystals containing silver phosphate glass**

Ojha, N., Bogdan, M., Galatus, R. & Petit, L., 15 Sep 2020, In : Journal of Non-Crystalline Solids. 544, 120243.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Effect of Hole Transporting Material on Charge Transfer Processes in Zinc Phthalocyanine Sensitized ZnO Nanorods**

Hakola, H., Sariola-Leikas, E., Efimov, A. & Tkachenko, N. V., 21 Apr 2016, In : Journal of Physical Chemistry C. 120, 13, p. 7044-7051 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Effect of incorporation of CdS NPs on performance of PTB7: PCBM organic solar cells**

Sharma, R., Bhalerao, S. & Gupta, D., 1 Jun 2016, In : Organic Electronics: physics, materials, applications. 33, p. 274-280 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Effect of sol-gel derived in situ silica on the morphology and mechanical behavior of natural rubber and acrylonitrile butadiene rubber blends**

Kapgate, B. P., Das, C., Das, A., Basu, D., Reuter, U. & Heinrich, G., Sep 2012, In : JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY. 63, 3, p. 501-509 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

#### **Effect of the addition of $\text{Al}_2\text{O}_3$ , $\text{TiO}_2$ and $\text{ZnO}$ on the thermal, structural and luminescence properties of $\text{Er}^{3+}$ -doped phosphate glasses**

Lopez-Iscoa, P., Petit, L., Massera, J., Janner, D., Boetti, N. G., Pugliese, D., Fiorilli, S., Novara, C., Giorgis, F. & Milanese, D., 15 Mar 2017, In : Journal of Non-Crystalline Solids. 460, p. 161-168 8 p.

**Effect of the glass melting condition on the processing of phosphate-based glass-ceramics with persistent luminescence properties**

Massera, J., Gaussiran, M., Głuchowski, P., Lastusaari, M., Petit, L., Hölsä, J. & Hupa, L., 1 Feb 2016, In : Optical Materials. 52, p. 56-61 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Effects of insertion of strain-engineering Ga(In)NAs layers on optical properties of InAs/GaAs quantum dots for high-efficiency solar cells**

Pavelescu, E.-M., Polojärvi, V., Schramm, A., Tukiainen, A., Aho, A., Zhang, W., Puustinen, J., Salmi, J. & Guina, M., 1 Feb 2016, In : Optical Materials. 52, p. 177-180 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Effects of thinning and heating for TiO<sub>2</sub>/AlInP junctions**

Mäkelä, J., Tuominen, M., Yasir, M., Polojärvi, V., Aho, A., Tukiainen, A., Kuzmin, M., Punkkinen, M. P. J., Laukkanen, P., Kokko, K. & Guina, M., 24 Aug 2015, In : Journal of Electron Spectroscopy and Related Phenomena. 205, p. 6-9 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Efficient photon upconversion at remarkably low annihilator concentrations in a liquid polymer matrix: when less is more**

Durandin, N. A., Isokuortti, J., Efimov, A., Vuorimaa-Laukkanen, E., Tkachenko, N. V. & Laaksonen, T., 2018, In : Chemical Communications. 54, 99, p. 14029-14032 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Electrical Contacts in SOI MEMS Using Aerosol Jet Printing**

Khorramdel, B., Torkkeli, A. & Mäntysalo, M., 2017, In : IEEE Journal of the Electron Devices Society. 6, p. 34-40

Research output: Contribution to journal > Article > Scientific > peer-review

**Electronic transport in n-type modulation-doped AlGaAs/GaAsBi quantum well structures: Influence of Bi and thermal annealing on electron effective mass and electron mobility**

Donmez, O., Aydin, M., Ardali, Yildirim, S., Tiraş, E., Nutku, F., Cetinkaya, C., okduyugulular, E., Puustinen, J., Hilska, J., Guina, M. & Erol, A., 2020, In : Semiconductor Science and Technology. 35, 2, 025009.

Research output: Contribution to journal > Article > Scientific > peer-review

**Electro-optic steering of nematicons**

Assanto, G., Piccardi, A., Barboza, R. & Alberucci, A., 2012, In : Photonics Letters of Poland. 4, 1, p. 2-4 3 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Electro-optic steering of random laser emission in liquid crystals**

Assanto, G., Perumbilavil, S., Piccardi, A. & Kauranen, M., 2018, In : Photonics Letters of Poland. 10, 4, p. 103-105 3 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Electrospun Black Titania Nanofibers: Influence of Hydrogen Plasma-Induced Disorder on the Electronic Structure and Photoelectrochemical Performance**

Lepcha, A., Maccato, C., Mettenbörger, A., Andreu, T., Mayrhofer, L., Walter, M., Olthof, S., Ruoko, T. P., Klein, A., Moseler, M., Meerholz, K., Morante, J. R., Barreca, D. & Mathur, S., 20 Aug 2015, In : Journal of Physical Chemistry C. 119, 33, p. 18835-18842 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Energy density-method: An approach for a quick estimation of quench temperatures in high-field accelerator magnets**

Salmi, T. & Schoerling, D., Jun 2019, In : IEEE Transactions on Applied Superconductivity. 29, 4

Research output: Contribution to journal > Article > Scientific > peer-review

**Engineering of Chern insulators and circuits of topological edge states**

Minarelli, E. L., Pojöhönen, K., Van Dalum, G. A. R., Ojanen, T. & Fritz, L., 10 Apr 2019, In : Physical Review B. 99, 16, 165413.

Research output: Contribution to journal > Article > Scientific > peer-review

**ESD qualification data used as the basis for building electrostatic discharge protected areas**

Tamminen, P., Viheriäkoski, T., Sydänheimo, L. & Ukkonen, L., 1 Oct 2015, In : Journal of Electrostatics. 77, p. 174-181 8 p., 3024.

Research output: Contribution to journal > Article > Scientific > peer-review

**Essential Measurements for Finite Element Simulations of Magnetostrictive Materials**

Poutala, A., Kovanen, T. & Kettunen, L., 2018, In : IEEE Transactions on Magnetics. 54, 1, 7200107.

Research output: Contribution to journal > Article > Scientific > peer-review

**Evaluation of Aerosol, Superfine Inkjet, and Photolithography Printing Techniques for Metallization of Application Specific Printed Electronic Circuits**

Mashayekhi, M., Winchester, L., Evans, L., Pease, T., Laurila, M-M., Mäntysalo, M., Ogier, S., Teres, L. & Carrabina, J., 1 Mar 2016, In : IEEE Transactions on Electron Devices. 63, 3, p. 1246-1253 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Evaluation of crushing strength of spray-dried MgAl<sub>2</sub>O<sub>4</sub> granule beds**

Kanerva, U., Suhonen, T., Lagerbom, J. & Levänen, E., 1 Aug 2015, In : Ceramics International. 41, 7, p. 8494-8500 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Evaluation of screen printed silver trace performance and long-term reliability against environmental stress on a low surface energy substrate**

Mikkonen, R. & Mäntysalo, M., 1 Jul 2018, In : Microelectronics Reliability. 86, p. 54-65 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Exciton localization and structural disorder of GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells grown by molecular beam epitaxy on (311)B GaAs substrates**

Prando, G. A., Orsi Gordo, V., Puustinen, J., Hilska, J., Alghamdi, H. M., Som, G., Gunes, M., Akyol, M., Souto, S., Rodrigues, A. D., Galeti, H. V. A., Henini, M., Gobato, Y. G. & Guina, M., 17 Jul 2018, In : Semiconductor Science and Technology. 33, 8, 084002.

Research output: Contribution to journal > Article > Scientific > peer-review

**Experimental realization of wave-packet dynamics in cyclic quantum walks**

Nejadsattari, F., Zhang, Y., Bouchard, F., Larocque, H., Sit, A., Cohen, E., Fickler, R. & Karimi, E., 20 Feb 2019, In : Optica. 6, 2, p. 174-180 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Exploration of Two Layer Nb<sub>3</sub>Sn Designs of the Future Circular Collider Main Quadrupoles**

Lorin, C., Fleiter, J., Salmi, T. & Schoerling, D., 1 Aug 2019, In : IEEE Transactions on Applied Superconductivity. 29, 5, 4001005.

Research output: Contribution to journal > Article > Scientific > peer-review

**Fabrication of ssDNA/Oligo(ethylene glycol) monolayers and patterns by exchange reaction promoted by ultraviolet light irradiation**

Khan, M. N. & Zharnikov, M., 27 Nov 2013, In : Journal of Physical Chemistry C. 117, 47, p. 24883-24893 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Fabrication of ssDNA/oligo(ethylene glycol) monolayers by promoted exchange reaction with thiol and disulfide substituents**

Khan, M. N. & Zharnikov, M., 13 Feb 2014, In : Journal of Physical Chemistry C. 118, 6, p. 3093-3101 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Features of correlation measurements of the parameters of pulsed hyperspectral optical fields using an asymmetric interferometer**

Kulya, M. S., Katkovnik, V. Y., Egiazarian, K. & Petrov, N. V., 2020, In : Quantum Electronics. 50, 7, p. 679-682 4 p.

**FEM for directly coupled magneto-mechanical phenomena in electrical machines**

Fonteyn, K., Belahcen, A., Kouhia, R., Rasilo, P. & Arkkio, A., Aug 2010, In : IEEE Transactions on Magnetics. 46, 8, p. 2923-2926 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**First Cold Powering Test of REBCO Roebel Wound Coil for the EuCARD2 Future Magnet Development Project**

Kirby, G. A., Van Nugteren, J., Bajas, H., Benda, V., Ballarino, A., Bajko, M., Bottura, L., Broekens, K., Canale, M., Chiuchiolo, A., Gentini, L., Peray, N., Perez, J. C., De Rijk, G., Rijllart, A., Rossi, L., Murtomaeki, J., Mazet, J., Pincot, F. O., Volpini, G., Durante, M., Fazilleau, P., Lorin, C., Stenvall, A., Goldacker, W., Kario, A. & Usoskin, A., 1 Jun 2017, In : IEEE Transactions on Applied Superconductivity. 27, 4, 4003307.

Research output: Contribution to journal > Article > Scientific > peer-review

**First principles prediction of the solar cell efficiency of chalcopyrite materials  $\text{AgMX}_2$ (M=In, Al; X=S, Se, Te)**

Dongho-Nguimdo, G. M., Igumbor, E., Zambou, S. & Joubert, D. P., 1 Dec 2019, In : Computational Condensed Matter. 21, e00391.

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**Fluid flow simulations meet high-speed video: Computer vision comparison of droplet dynamics**

Kulju, S., Rieger, L., Koltay, P., Mattila, K. & Hyväläuma, J., 15 Jul 2018, In : Journal of Colloid and Interface Science. 522, p. 48-56 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Fluorimetric oxygen sensor with an efficient optical read-out for in vitro cell models**

Välimäki, H., Verho, J., Kreutzer, J., Kattiparambil Rajan, D., Rynänen, T., Pekkanen-Mattila, M., Ahola, A., Tappura, K., Kallio, P. & Lekkala, J., 1 Oct 2017, In : Sensors and Actuators B: Chemical. 249, p. 738-746 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Frequency modulation of semiconductor disk laser pulses**

Zolotovskii, I. O., Korobko, D. A. & Okhotnikov, O. G., 2015, In : Quantum Electronics. 45, 7, p. 628-634 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Full-field mode sorter using two optimized phase transformations for high-dimensional quantum cryptography**

Fickler, R., Bouchard, F., Giese, E., Grillo, V., Leuchs, G. & Karimi, E., 2020, In : Journal of Optics (United Kingdom). 22, 2, 7 p., 024001.

Research output: Contribution to journal > Article > Scientific > peer-review

**Fundamental gaps of quantum dots on the cheap**

Guandalini, A., Rozzi, C. A., Räsänen, E. & Pittalis, S., 25 Mar 2019, In : Physical Review B. 99, 12, 125140.

Research output: Contribution to journal > Article > Scientific > peer-review

**GaInAsSb/AlGa(In)AsSb type I quantum wells emitting in  $3\mu\text{m}$  range for application in superluminescent diodes**

Kurka, M., Dyksik, M., Suomalainen, S., Koivusalo, E., Guina, M. & Motyka, M., 1 May 2019, In : Optical Materials. 91, p. 274-278 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Generalized slip transformations and air-gap harmonics in field models of electrical machines**

Räsänen, V., Suuriniemi, S. & Kettunen, L., 1 Sep 2016, In : IEEE Transactions on Magnetics. 52, 9, 8107708.

Research output: Contribution to journal > Article > Scientific > peer-review

**Generation of a broad IR spectrum and N-soliton compression in a longitudinally inhomogeneous dispersion-shifted fibre**

Zolotovskii, I. O., Korobko, D. A., Okhotnikov, O. G., Stolyarov, D. A. & Sysolyatin, A. A., 2015, In : Quantum Electronics. 45, 9, p. 844-852 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Generation of bound states of pulses in a soliton laser with complex relaxation of a saturable absorber**  
Zolotovskii, I. O., Korobko, D. A., Gumenyuk, R. V. & Okhotnikov, O. G., 2015, In : Quantum Electronics. 45, 1, p. 26-34 9 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Generation of Sub-100 ps Pulses at 532, 355, and 266 nm Using a SESAM Q-Switched Microchip Laser**  
Nikkinen, J., Häkkinen, A., Leino, I. & Guina, M., 1 Nov 2017, In : IEEE Photonics Technology Letters. 29, 21, p. 1816-1819 4 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Geometric Structure and Chemical Ordering of Large AuCu Clusters: A Computational Study**  
Goh, J-Q., Akola, J. & Ferrando, R., 25 May 2017, In : Journal of Physical Chemistry C. 121, 20, p. 10809-10816 8 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Geometry Analysis in Screen-Printed Stretchable Interconnects**  
Mosallaei, M., Jokinen, J., Honkanen, M., Iso-Ketola, P., Vippola, M., Vanhala, J., Kanerva, M. & Mantysalo, M., Aug 2018, In : IEEE Transactions on Components, Packaging and Manufacturing Technology. 8, 8, p. 1344-1352  
Research output: Contribution to journal › Article › Scientific › peer-review

**Germanium-on-glass solar cells: Fabrication and characterization**  
Sorianello, V., Colace, L., Maragliano, C., Fulgoni, D., Nash, L. & Assanto, G., 2013, In : Optical Materials Express. 3, 2, p. 216-228 13 p.  
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**Ghost imaging in the time domain**  
Ryczkowski, P., Barbier, M., Friberg, A. T., Dudley, J. M. & Genty, G., 1 Feb 2016, In : Nature Photonics. 10, p. 167-170 4 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Goos-Hänchen and Imbert-Fedorov shifts for epsilon-near-zero materials**  
Niemenen, A., Marini, A. & Ornigotti, M., 28 Jan 2020, In : Journal of Optics. 22, 3, 035601.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Graphene-based tunable plasmon induced transparency in gold strips**  
Habib, M., Rashed, A. R., Ozbay, E. & Caglayan, H., 1 Apr 2018, In : Optical Materials Express. 8, 4, p. 1069-1074 6 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Hafnium oxide thin films as a barrier against copper diffusion in solar absorbers**  
Kotilainen, M., Krumpolec, R., Franta, D., Souček, P., Homola, T., Cameron, D. C. & Vuoristo, P., 1 Jul 2017, In : Solar Energy Materials and Solar Cells. 166, p. 140-146 7 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Halogen bonding stabilizes a cis-azobenzene derivative in the solid state: A crystallographic study**  
Saccone, M., Siiskonen, A., Fernandez-Palacio, F., Priimägi, A., Terraneo, G., Resnati, G. & Metrangolo, P., 1 Apr 2017, In : ACTA CRYSTALLOGRAPHICA SECTION B : STRUCTURAL SCIENCE, CRYSTAL ENGINEERING AND MATERIALS. 73, 2, p. 227-233 7 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Halogen bonding versus hydrogen bonding in driving self-assembly and performance of light-responsive supramolecular polymers**  
Priimagi, A., Cavallo, G., Forni, A., Gorynsztein-Leben, M., Kaivola, M., Metrangolo, P., Milani, R., Shishido, A., Pilati, T., Resnati, G. & Terraneo, G., 20 Jun 2012, In : Advanced Functional Materials. 22, 12, p. 2572-2579 8 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Harmonic mode-locking fiber ring laser with a pulse repetition rate up to 12 GHz**

Korobko, D. A., Stolarov, D. A., Itrin, P. A., Odnoblyudov, M. A., Petrov, A. B. & Gumenyuk, R. V., 2020, In : Optics and laser technology. 133, 6 p., 106526.

Research output: Contribution to journal › Article › Scientific › peer-review

**Hematite Surface Modification toward Efficient Sunlight-Driven Water Splitting Activity: The Role of Gold Nanoparticle Addition**

Tofanello, A., Freitas, A. L. M., Carvalho, W. M., Salminen, T., Niemi, T. & Souza, F. L., 2020, In : Journal of Physical Chemistry C.

Research output: Contribution to journal › Article › Scientific › peer-review

**High-dimensional quantum gates using full-field spatial modes of photons**

Brandt, F., Hiekkämäki, M., Bouchard, F., Huber, M. & Fickler, R., 20 Feb 2020, In : Optica. 7, 2, p. 98-107 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Highly efficient charge separation in model Z-scheme  $\text{TiO}_2/\text{TiSi}_2/\text{Si}$  photoanode by micropatterned titanium silicide interlayer**

Hannula, M., Ali-Löytty, H., Lahtonen, K., Saari, J., Tukiainen, A. & Valden, M., 1 Aug 2019, In : Acta Materialia. 174, p. 237-245 9 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**High performance corrosion resistant coatings by novel coaxial cold- and hot-wire laser cladding methods**

Pajukoski, H., Nääkki, J., Thieme, S., Tuominen, J., Nowotny, S. & Vuoristo, P., 2016, In : Journal of Laser Applications. 28 , 1, 012011.

Research output: Contribution to journal › Article › Scientific › peer-review

**High-resolution coded-aperture design for compressive X-ray tomography using low resolution detectors**

Mojica, E., Pertuz, S. & Arguello, H., 2017, In : Optics Communications. 404, p. 103-109

Research output: Contribution to journal › Article › Scientific › peer-review

**Hot spot temperature in an HTS Coil: Simulations with MIITs and finite element method**

Härö, E., Stenvall, A., Van Nugteren, J. & Kirby, G., 1 Apr 2015, In : IEEE Transactions on Applied Superconductivity. 25, 2

Research output: Contribution to journal › Article › Scientific › peer-review

**How well can we predict cluster fragmentation inside a mass spectrometer?**

Passananti, M., Zapadinsky, E., Zanca, T., Kangasluoma, J., Mylllys, N., Rissanen, M. P., Kurtén, T., Ehn, M., Attoui, M. & Vehkämäki, H., 2019, In : Chemical Communications. 55, 42, p. 5946-5949 4 p.

Research output: Contribution to journal › Article › Scientific › peer-review

**Hyperspectral phase imaging based on denoising in complex-valued eigensubspace**

Shevkunov, I., Katkovnik, V., Claus, D., Pedrini, G., Petrov, N. V. & Egiazarian, K., 1 Apr 2020, In : Optics and Lasers in Engineering. 127, 10 p., 105973.

Research output: Contribution to journal › Article › Scientific › peer-review

**ICED - Inductively Coupled Energy Dissipater for Future High Field Accelerator Magnets**

Murtomäki, J. S., van Nugteren, J., Kirby, G., DeRijk, G., Rossi, L. & Stenvall, A., Dec 2018, In : IEEE Transactions on Applied Superconductivity. 28, 8, 4009015.

Research output: Contribution to journal › Article › Scientific › peer-review

**Identification of synchronous machine magnetization characteristics from calorimetric core-loss and no-load curve measurements**

Rasilo, P., Abdallah, A. A. E., Belahcen, A., Arkkio, A. & Dupré, L., 1 Mar 2015, In : IEEE Transactions on Magnetics. 51, 3 , 2001304.

Research output: Contribution to journal › Article › Scientific › peer-review

**Importance of iron-loss modeling in simulation of wound-field synchronous machines**

Rasilo, P., Belahcen, A. &amp; Arkkio, A., 2012, In : IEEE Transactions on Magnetics. 48, 9, p. 2495-2504 10 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Improvements in the electromechanical properties of stretchable interconnects by locally tuning the stiffness**

Mosallaei, M., Di Vito, D., Khorramdel, B. &amp; Mäntysalo, M., 2020, In : Flexible and Printed Electronics. 5, 1, 015004.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Influence of As/group-III flux ratio on defects formation and photovoltaic performance of GaInNAs solar cells**

Polojärvi, V., Aho, A., Tukiainen, A., Raappana, M., Aho, T., Schramm, A. &amp; Guina, M., 1 May 2016, In : Solar Energy Materials and Solar Cells. 149, p. 213-220 8 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Influence of environmental conditions on EMF levels in a span of overhead transmission lines**

Okun, O., Kravchenko, Y. &amp; Korpinen, L., 2016, In : Progress in Electromagnetics Research C. 63, p. 163-171 9 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Influence of temperature-induced copper diffusion on degradation of selective chromium oxy-nitride solar absorber coatings**

Kotilainen, M., Honkanen, M., Mizohata, K. &amp; Vuoristo, P., 2016, In : Solar Energy Materials and Solar Cells. 145, p. 323-332 10 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Influence of the P<sub>2</sub>O<sub>5</sub>/Al<sub>2</sub>O<sub>3</sub> co-doping on the local environment of erbium ions and on the 1.5 μm quantum efficiency of Er<sup>3+</sup>-borosilicate glasses**

Bourhis, K., Boetti, N. G., Koponen, J., Milanese, D. &amp; Petit, L., Mar 2014, In : Optical Materials. 36, 5, p. 926-931 6 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Influence of the phosphate glass melt on the corrosion of functional particles occurring during the preparation of glass-ceramics**

Ojha, N., Laihinen, T., Salminen, T., Lastusaari, M. &amp; Petit, L., Jun 2018, In : Ceramics International. 44, 10, p. 11807-11811

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Inkjet catalyst printing and electroless copper deposition for low-cost patterned microwave passive devices on paper**

Cook, B. S., Fang, Y., Kim, S., Le, T., Goodwin, W. B., Sandhage, K. H. &amp; Tentzeris, M. M., Sep 2013, In : Electronic Materials Letters. 9, 5, p. 669-676 8 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Inkjet printing of radio frequency electronics: Design methodologies and application of novel nanotechnologies**

Le, T., Lin, Z., Vyas, R., Lakafosis, V., Yang, L., Traillie, A., Tentzeris, M. M. &amp; Wong, C. P., 2013, In : Journal of Electronic Packaging. 135, 1, 011007.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Instability of cuboctahedral copper clusters**

Valkealahti, S. &amp; Manninen, M., 1 Jan 1992, In : Physical Review B. 45, 16, p. 9459-9462 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Interfacial design and structure of protein/polymer films on oxidized AlGaN surfaces**

Gupta, S. K., Wu, H. H., Kwak, K. J., Casal, P., Nicholson, T. R., Wen, X., Anisha, R., Bhushan, B., Berger, P. R., Lu, W., Brillson, L. J. &amp; Lee, S. C., 26 Jan 2011, In : Journal of Physics D: Applied Physics. 44, 3, 34010.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Investigating solvent effects on aggregation behaviour, linear and nonlinear optical properties of silver nanoclusters**

Bhavitha, K. B., Nair, A. K., Perumbilavil, S., Joseph, S., Kala, M. S., Saha, A., Narayanan, R. A., Hameed, N., Thomas, S., Oluwafemi, O. S. &amp; Kalarikkal, N., 1 Nov 2017, In : Optical Materials. 73, p. 695-705 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Investigating the metallic behavior of Na clusters using site-specific polarizabilities**

Ma, L., Jackson, K. A., Wang, J., Horoi, M. & Jellinek, J., 24 Jan 2014, In : Physical Review B. 89, 3, 035429.

Research output: Contribution to journal > Article > Scientific > peer-review

**Investigation of long-term chemical stability of structured ZnO films in aqueous solutions of varying conditions**

Heinonen, S., Nikkanen, J-P., Huttunen-Saarivirta, E. & Levänen, E., 30 Sep 2017, In : Thin Solid Films. 638, p. 410-419 10 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Investigation of REBCO Roebel Cable Irreversible Critical Current Degradation Under Transverse Pressure**

Murto mäki, J. S., Kouhia, R., Stenvall, A., Bottura, L., Kirby, G., van Nugteren, J., DeRijk, G. & Rossi, L., Jun 2018, In : IEEE Transactions on Applied Superconductivity. 28, 4, 4802506.

Research output: Contribution to journal > Article > Scientific > peer-review

**Iron losses, magnetoelasticity and magnetostriction in ferromagnetic steel laminations**

Rasilo, P., Singh, D., Belahcen, A. & Arkkio, A., 2013, In : IEEE Transactions on Magnetics. 49, 5, p. 2041-2044 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Irradiation promoted exchange reaction with disulfide substituents**

Khan, M. N. & Zharnikov, M., 18 Jul 2013, In : Journal of Physical Chemistry C. 117, 28, p. 14534-14543 10 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Laser angle-resolved photoemission as a probe of initial state kz dispersion, final-state band gaps, and spin texture of Dirac states in the Bi<sub>2</sub>Te<sub>3</sub> topological insulator**

Ärrälä, M., Hafiz, H., Mou, D., Wu, Y., Jiang, R., Riedemann, T., Lograsso, T. A., Barbiellini, B., Kaminski, A., Bansil, A. & Lindroos, M., 27 Oct 2016, In : Physical Review B. 94, 15, 7 p., 155144.

Research output: Contribution to journal > Article > Scientific > peer-review

**Light-trapping enhanced thin-film III-V quantum dot solar cells fabricated by epitaxial lift-off**

Cappelluti, F., Kim, D., van Eerden, M., Cédola, A. P., Aho, T., Bissels, G., Elsehrawy, F., Wu, J., Liu, H., Mulder, P., Bauhuis, G., Schermer, J., Niemi, T. & Guina, M., 2018, In : Solar Energy Materials and Solar Cells. 181, p. 83-92

Research output: Contribution to journal > Article > Scientific > peer-review

**Linear and nonlinear light beam propagation in chiral nematic liquid crystal waveguides**

Laudyn, U. A., Kwaśny, M., Jung, P. S., Trippenbach, M., Assanto, G. & Karpierz, M. A., 2016, In : Photonics Letters of Poland. 8, 1, p. 11-13 3 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Liquid crystal light valves: A versatile platform for nematicons**

Assanto, G., Piccardi, A., Alberucci, A., Residori, S. & Bortolozzo, U., 2009, In : Photonics Letters of Poland. 1, 4, p. 151-153 3 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Localized surface plasmon resonance in silver nanoparticles: Atomistic first-principles time-dependent density-functional theory calculations**

Kuisma, M., Sakkö, A., Rossi, T. P., Larsen, A. H., Enkovaara, J., Lehtovaara, L. & Rantala, T. T., 24 Mar 2015, In : Physical Review B. 91, 11, 8 p., 115431.

Research output: Contribution to journal > Article > Scientific > peer-review

**Long-Range Observation of Exciplex Formation and Decay Mediated by One-Dimensional Bridges**

Baek, J., Umeyama, T., Stranius, K., Yamada, H., Tkachenko, N. V. & Imahori, H., 29 Jun 2017, In : Journal of Physical Chemistry C. 121, 25, p. 13952-13961 10 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Low-temperature germanium thin films on silicon**

Sorianello, V., Colace, L., Armani, N., Rossi, F., Ferrari, C., Lazzarini, L. & Assanto, G., 1 Sep 2011, In : Optical Materials Express. 1, 5, p. 856-865 10 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Luminescent  $(\text{Er},\text{Ho})_2\text{O}_3$  thin films by ALD to enhance the performance of silicon solar cells**

Ghazy, A., Safdar, M., Lastusaari, M., Aho, A., Tukiainen, A., Savin, H., Guina, M. & Karppinen, M., 2020, In : Solar Energy Materials and Solar Cells. 219, 5 p., 110787.

Research output: Contribution to journal > Article > Scientific > peer-review

**Magnetic and mechanical design of a 16 T common coil dipole for FCC**

Toral, F., Munilla, J. & Salmi, T., 2018, In : IEEE Transactions on Applied Superconductivity. 28, 3, 4004305.

Research output: Contribution to journal > Article > Scientific > peer-review

**Magnetic non-contact friction from domain wall dynamics actuated by oscillatory mechanical motion**

Rissanen, I. & Laurson, L., 13 Aug 2019, In : Journal of Physics D: Applied Physics. 52, 44, 445002.

Research output: Contribution to journal > Article > Scientific > peer-review

**Measuring optical anisotropy in poly(3,4-ethylene dioxythiophene): poly(styrene sulfonate) films with added graphene**

Isoniemi, T., Tuukkanen, S., Cameron, D. C., Simonen, J. & Toppari, J. J., 9 Jul 2015, In : Organic Electronics. 25, p. 317-323 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Mechanical behavior of a 16 T FCC dipole magnet during a quench**

Zhao, J., Stenvall, A., Salmi, T., Gao, Y. & Lorin, C., 2017, In : IEEE Transactions on Applied Superconductivity. 27, 6, 4004407.

Research output: Contribution to journal > Article > Scientific > peer-review

**Mechanical characterization of pore-graded bioactive glass scaffolds produced by robocasting**

Barberi, J., Nommeots-Nomm, A., Fiume, E., Verné, E., Massera, J. & Baino, F., 2019, In : Biomedical Glasses. 5, 1, p. 140-147 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Mechanical Effects of the Nonuniform Current Distribution on HTS Coils for Accelerators Wound With REBCO Roebel Cable**

Murtomaki, J. S., Van Nugteren, J., Kirby, G., Rossi, L., Ruuskanen, J. & Stenvall, A., 1 Jun 2017, In : IEEE Transactions on Applied Superconductivity. 27, 4, 4100405.

Research output: Contribution to journal > Article > Scientific > peer-review

**Mechanical stress analysis during a quench in CLIQ protected 16 T dipole magnets designed for the future circular collider**

Zhao, J., Prioli, M., Stenvall, A., Salmi, T., Gao, Y., Caiffi, B., Lorin, C., Marinozzi, V., Farinon, S. & Sorbi, M., 15 Jul 2018, In : Physica C: Superconductivity and its Applications. 550, p. 27-34 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Membrane bound COMT isoform is an interfacial enzyme: General mechanism and new drug design paradigm**

Magarkar, A., Parkkila, P., Viitala, T., Lajunen, T., Mobarak, E., Licari, G., Cramariuc, O., Vauthey, E., Rög, T. & Bunker, A., 11 Apr 2018, In : Chemical Communications. 54, 28, p. 3440-3443 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Micro-Raman characterization of Germanium thin films evaporated on various substrates**

Sorianello, V., Colace, L., Assanto, G. & Nardone, M., Apr 2011, In : Microelectronic Engineering. 88, 4, p. 492-495 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Mining tailings as raw materials for reaction-sintered aluminosilicate ceramics: Effect of mineralogical composition on microstructure and properties**

Karhu, M., Lagerbom, J., Solismaa, S., Honkanen, M., Ismailov, A., Räisänen, M. L., Huttunen-Saarivirta, E., Levänen, E. & Kivikytö-Reponen, P., Mar 2019, In : Ceramics International. 45, 4, p. 4840-4848

Research output: Contribution to journal > Article > Scientific > peer-review

**Modification of Surface States of Hematite-Based Photoanodes by Submonolayer of TiO<sub>2</sub>for Enhanced Solar Water Splitting**

Palmolahti, L., Ali-Löytty, H., Khan, R., Saari, J., Tkachenko, N. V. & Valden, M., 2020, In : Journal of Physical Chemistry C. 124, 24, p. 13094-13101 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Morphology evolution of PS-b-PDMS block copolymer and its hierarchical directed self-assembly on block copolymer templates**

Rasappa, S., Schulte, L., Borah, D., Hulkkonen, H., Ndoni, S., Salminen, T., Senthamaraiakanan, R., Morris, M. A. & Niemi, T., 15 May 2018, In : Microelectronic Engineering. 192, p. 1-7 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Multisoliton complexes in fiber lasers**

Korobko, D. A., Gumennyuk, R., Zolotovskii, I. O. & Okhotnikov, O. G., Dec 2014, In : Optical Fiber Technology. 20, 6, p. 593-609 17 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Multistep Bloch-line-mediated Walker breakdown in ferromagnetic strips**

Hütnér, J., Herranen, T. & Laurson, L., 24 May 2019, In : Physical Review B. 99, 17, 174427.

Research output: Contribution to journal > Article > Scientific > peer-review

**Narrow-linewidth 780 nm DFB lasers fabricated using nanoimprint lithography**

Virtanen, H., Uusitalo, T., Karjalainen, M., Ranta, S., Viheriala, J. & Dumitrescu, M., 2018, In : IEEE Photonics Technology Letters. 30, 1, p. 51-54

Research output: Contribution to journal > Article > Scientific > peer-review

**Near-infrared photodetectors in evaporated ge: Characterization and TCAD simulations**

Sorianello, V., De Iacovo, A., Colace, L. & Assanto, G., 2013, In : IEEE Transactions on Electron Devices. 60, 6, p. 1995-2000 6 p., 6515586.

Research output: Contribution to journal > Article > Scientific > peer-review

**Near-surface defect profiling with slow positrons: Argon-sputtered Al(110)**

Vehtanen, A., Mäkinen, J., Hautojarvi, P., Huomo, H., Lahtinen, J., Nieminen, R. M. & Valkealahti, S., 1 Jan 1985, In : Physical Review B. 32, 11, p. 7561-7563 3 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Near-threshold high spin amplification in a 1300 nm GaInNAs spin laser**

Cemlyn, B., Adams, M., Harbord, E., Li, N., Henning, I. D., Oulton, R., Korpijärvi, V. M. & Guina, M., 1 Aug 2018, In : Semiconductor Science and Technology. 33, 9, 094005.

Research output: Contribution to journal > Article > Scientific > peer-review

**Non-destructive and wireless monitoring of biodegradable polymers**

Salpavaara, T., Hänninen, A., Antniemi, A., Lekkala, J. & Kellomäki, M., 2017, In : Sensors and Actuators B: Chemical. 251, p. 1018-1025

Research output: Contribution to journal > Article > Scientific > peer-review

**Nonlinear optical activity effects in complex anisotropic three-dimensional media**

Huttunen, M. J., Partanen, M., Bautista, G., Chu, S-W. & Kauranen, M., 2015, In : Optical Materials Express. 5, 1, p. 11-21 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Nonlocal soliton scattering in random potentials**

Piccardi, A., Residori, S. &amp; Assanto, G., 1 Jul 2016, In : Journal of Optics. 18, 7, 5 p., 07LT01.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Novel borosilicate bioactive scaffolds with persistent luminescence**

Del Cerro, P. R., Teittinen, H., Norrbo, I., Lastusaari, M., Massera, J. &amp; Petit, L., 2020, In : Biomedical Glasses. 6, 1, p. 1-9 9 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Novel oxyfluorophosphate glasses and glass-ceramics**

Cui, S., Massera, J., Lastusaari, M., Hupa, L. &amp; Petit, L., 1 Aug 2016, In : Journal of Non-Crystalline Solids. 445-446, p. 40-44 5 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Observation of cavity structures in composite metamaterials**

Caglayan, H. &amp; Özbay, E., 2010, In : Journal of Nanophotonics. 4, 1, 041790.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Observation of off-axis directional beaming via subwavelength asymmetric metallic gratings**

Caglayan, H., Bulu, I. &amp; Ozbay, E., 2009, In : Journal of Physics D: Applied Physics. 42, 4, 045105.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Observation of PT-symmetric quantum interference**

Klauck, F., Teuber, L., Ornigotti, M., Heinrich, M., Scheel, S. &amp; Szameit, A., 16 Sep 2019, In : Nature Photonics.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Observation of unusual metal-semiconductor interaction and metal-induced gap states at an oxide-semiconductor interface: The case of epitaxial BaO/Ge(100) junction**

Kuzmin, M., Laukkanen, P., Yasir, M., Mäkelä, J., Tuominen, M., Dahl, J., Punkkinen, M. P. J., Kokko, K., Hedman, H. P., Moon, J., Punkkinen, R., Polojärvi, V., Korpijärvi, V. M. &amp; Guina, M., 20 Oct 2015, In : Physical Review B. 92, 16, 165311.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**On the limit of superhydrophobicity: Defining the minimum amount of TiO<sub>2</sub> nanoparticle coating**

Haapanen, J., Aromaa, M., Teisala, H., Juuti, P., Tuominen, M., Sillanpää, M., Stepien, M., Saarinen, J. J., Toivakka, M., Kuusipalo, J. &amp; Mäkelä, J. M., 2019, In : Materials Research Express. 6, 3, 035004.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Open Material Property Library With Native Simulation Tool Integrations - MASTO**

Stenvall, A. &amp; Lahtinen, V., 2018, In : IEEE Transactions on Applied Superconductivity.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Optical power monitors in Ge monolithically integrated on SOI chips**

Colace, L., Sorianello, V., Romagnoli, M., Socci, L. &amp; Assanto, G., Apr 2011, In : Microelectronic Engineering. 88, 4, p. 514-517 4 p.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Optical properties of GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum well structures grown by molecular beam epitaxy on (100) and (311)B GaAs substrates**

Gunes, M., Ukelge, M. O., Donmez, O., Erol, A., Gumus, C., Alghamdi, H., Galeti, H. V. A., Henini, M., Schmidbauer, M., Hilska, J., Puustinen, J. &amp; Guina, M., 13 Nov 2018, In : Semiconductor Science and Technology. 33, 12, 124015.

Research output: Contribution to journal &gt; Article &gt; Scientific &gt; peer-review

**Optimization of an E3SPreSSO Energy-Extraction System for High-Field Superconducting Magnets**

Ruuskanen, J., Stenvall, A., Van Nugteren, J. &amp; Lahtinen, V., 1 Apr 2018, In : IEEE Transactions on Applied Superconductivity. 28, 3, 4700805.

Research output: Contribution to journal > Article > Scientific > peer-review

**Optimization of convectively cooled heat sinks**

Lampio, K. & Karvinen, R., 2017, In : *Microelectronics Reliability*. 79, p. 473-479

Research output: Contribution to journal > Article > Scientific > peer-review

**Paraxial light beams in structured anisotropic media**

Jisha, C. P. & Alberucci, A., 1 Nov 2017, In : *Journal of the Optical Society of America A: Optics and Image Science, and Vision*. 34, 11, p. 2019-2024 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Passive resonance sensor based method for monitoring particle suspensions**

Salpavaara, T., Järveläinen, M., Seppälä, S., Yli-Hallila, T., Verho, J., Vilkko, M., Lekkala, J. & Levänen, E., 8 Jun 2015, In : *Sensors and Actuators B: Chemical*. 219, p. 324-330 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Perfect magnetic mirror and simple perfect absorber in the visible spectrum**

Valagiannopoulos, C. A., Tukiainen, A., Aho, T., Niemi, T., Guina, M., Tretyakov, S. A. & Simovski, C. R., 11 Mar 2015, In : *Physical Review B*. 91, 11, 115305.

Research output: Contribution to journal > Article > Scientific > peer-review

**Performance enhancement of the RFID EPC Gen2 protocol by exploiting collision recovery**

De Donno, D., Tarricone, L., Catarinucci, L., Lakafosis, V. & Tentzeris, M. M., 2012, In : *Progress in Electromagnetics Research B*. 43, p. 53-72 20 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Phosphate glasses with blue persistent luminescence prepared using the direct doping method**

Ojha, N., Tuomisto, M., Lastusaari, M. & Petit, L., Jan 2019, In : *Optical Materials*. 87, p. 151-156

Research output: Contribution to journal > Article > Scientific > peer-review

**Photocatalytic and antibacterial properties of ZnO films with different surface topographies on stainless steel substrate**

Heinonen, S., Kannisto, M., Nikkanen, J-P., Huttunen-Saarivirta, E., Karp, M. & Levänen, E., 1 Oct 2016, In : *Thin Solid Films*. 616, p. 842-849 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Photoinduced bending upon pulsed irradiation in azobenzene-containing crosslinked liquid-crystalline polymers**

Shimamura, A., Priimagi, A., Mamiya, J. I., Kinoshita, M., Ikeda, T. & Shishido, A., Sep 2011, In : *Journal of Nonlinear Optical Physics and Materials*. 20, 4, p. 405-413 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Photoinduced Electron Injection from Zinc Phthalocyanines into Zinc Oxide Nanorods: Aggregation Effects**

Virkki, K., Hakola, H., Urbani, M., Tejerina, L., Ince, M., Martínez-Díaz, M. V., Torres, T., Golovanova, V., Golovanov, V. & Tkachenko, N. V., 4 May 2017, In : *Journal of Physical Chemistry C*. 121, 17, p. 9594-9605 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Photoinduced Electron Transfer in CdSe/ZnS Quantum Dot-Fullerene Hybrids**

Virkki, K., Demir, S., Lemmetyinen, H. & Tkachenko, N. V., 23 Jul 2015, In : *Journal of Physical Chemistry C*. 119, 31, p. 17561-17572 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Photoinduced surface patterning of azobenzene-containing supramolecular dendrons, dendrimers and dendronized polymers**

Vapaavuori, J., Priimagi, A., Soininen, A. J., Canilho, N., Kasëmi, E., Ruokolainen, J., Kaivola, M. & Ikkala, O., 2013, In : *Optical Materials Express*. 3, 6, p. 711-722 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Photophysical properties of porphyrin dimer-single-walled carbon nanotube linked systems**

Baek, J., Umeyama, T., Mizuno, S., Tkachenko, N. V. & Imahori, H., 2017, In : Journal of Physical Chemistry C. 121, 39 Research output: Contribution to journal > Article > Scientific > peer-review

**Photovoltaic properties of low-bandgap (0.7–0.9eV) lattice-matched GaInNAsSb solar junctions grown by molecular beam epitaxy on GaAs**

Isoaho, R., Aho, A., Tukiainen, A., Aho, T., Raappana, M., Salminen, T., Reuna, J. & Guina, M., 15 Jun 2019, In : Solar Energy Materials and Solar Cells. 195, p. 198–203 6 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Physics and applications of photonic crystals**

Ozbay, E., Bulu, I., Aydin, K., Caglayan, H. & Guven, K., Oct 2004, In : Photonics and Nanostructures - Fundamentals and Applications. 2, 2, p. 87–95 9 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Physisorption of benzene on a tin dioxide surface: Van der Waals interaction**

Viitala, M., Kuisma, M. & Rantala, T. T., 8 Feb 2012, In : Physical Review B. 85, 8, p. 1-5 5 p., 085412.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Piezoresistive natural rubber-multiwall carbon nanotube nanocomposite for sensor applications**

Selvan, N. T., Eshwaran, S. B., Das, A., Stöckelhuber, K. W., Wiesner, S., Pötschke, P., Nando, G. B., Chervanyov, A. I. & Heinrich, G., 1 Mar 2016, In : Sensors and Actuators, A: Physical. 239, p. 102–113 12 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Plasma etch technologies for the development of ultra-small feature size transistor devices**

Borah, D., Shaw, M. T., Rasappa, S., Farrell, R. A., O'Mahony, C., Faulkner, C. M., Bosea, M., Gleeson, P., Holmes, J. D. & Morris, M. A., 4 May 2011, In : Journal of Physics D: Applied Physics. 44, 17, 174012.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Plasmon lifetime enhancement in a bright-dark mode coupled system**

Yıldız, B. C., Bek, A. & Taşgin, M. E., 16 Jan 2020, In : Physical Review B. 101, 3, 8 p., 035416.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Polymer stabilization enhances the orientational optical nonlinearity of oligothiophene-doped nematic liquid crystals**

Aihara, Y., Kinoshita, M., Wang, J., Mamiya, J. I., Priimagi, A. & Shishido, A., Nov 2013, In : Advanced Optical Materials. 1 , 11, p. 787–791 5 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Precipitate formation in aluminium alloys: Multi-scale modelling approach**

Kleiven, D. & Akola, J., 15 Aug 2020, In : Acta Materialia. 195, p. 123–131 9 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Preparation of water-based carbon nanotube inks and application in the inkjet printing of carbon nanotube gas sensors**

Lin, Z., Le, T., Song, X., Yao, Y., Li, Z., Moon, K. S., Tentzeris, M. M. & Wong, C. P., 2013, In : Journal of Electronic Packaging. 135, 1, 011001.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Printable and flexible macroporous organosilica film with high protein adsorption capacity**

Heikkinen, J. J., Kivimäki, L., Hytönen, V. P., Kulomaa, M. S. & Hormi, O. E. O., 1 Jan 2012, In : Thin Solid Films. 520, 6, p. 1934–1937 4 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Programming Photoresponse in Liquid Crystal Polymer Actuators with Laser Projector**

Wani, O. M., Zeng, H., Wasylczyk, P. & Priimagi, A., 2018, In : Advanced Optical Materials. 6, 1, 1700949.  
Research output: Contribution to journal > Article > Scientific > peer-review

### **Progress on HL-LHC Nb<sub>3</sub>Sn Magnets**

Todesco, E., Annarella, M., Ambrosio, G., Apollinari, G., Ballarino, A., Bajas, H., Bajko, M., Bordini, B., Bossert, R., Bottura, L., Cavanna, E., Cheng, D., Chlachidze, G., De Rijk, G., Dimarco, J., Ferracin, P., Fleiter, J., Guinchard, M., Hafalia, A., Holik, E., Izquierdo Bermudez, S., Lackner, F., Marchevsky, M., Loeffler, C., Nobrega, A., Perez, J. C., Prestemon, S., Ravaioli, E., Rossi, L., Sabbi, G., Salmi, T., Savary, F., Schmalzle, J., Stoynev, S., Strauss, T., Tartaglia, M., Vallone, G., Velev, G., Wanderer, P., Wang, X., Willering, G. & Yu, M., 1 Jun 2018, In : IEEE Transactions on Applied Superconductivity. 28, 4, 4008809.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Properties of nematicons in low-birefringence nematic liquid crystals**

Kwaśny, M., Laudyn, U. A., Sala, F. A., Piccardi, A., Alberucci, A., Karpierz, M. A. & Assanto, G., 2013, In : Photonics Letters of Poland. 5, 1, p. 8-10 3 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Protection Heater Design Validation for the LARP Magnets Using Thermal Imaging**

Marchevsky, M., Turqueti, M., Cheng, D. W., Felice, H., Sabbi, G., Salmi, T., Stenvall, A., Chlachidze, G., Ambrosio, G., Ferracin, P., Izquierdo Bermudez, S., Perez, J. C. & Todesco, E., 1 Jun 2016, In : IEEE Transactions on Applied Superconductivity. 26, 4, 4003605.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Quench Protection Study of the Eurocircol 16 T cosθ Dipole for the Future Circular Collider (FCC)**

Marinozzi, V., Bellomo, G., Caiffi, B., Fabbricatore, P., Farinon, S., Salmi, T., Sorbi, M., Stenvall, A. & Volpini, G., 1 Jun 2017, In : IEEE Transactions on Applied Superconductivity. 27, 4, 4702505.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Quench Protection Study of the Updated MQXF for the LHC Luminosity Upgrade (HiLumi LHC)**

Marinozzi, V., Ambrosio, G., Ferracin, P., Izquierdo Bermudez, S., Rysti, J., Salmi, T., Sorbi, M. & Todesco, E., 1 Jun 2016 , In : IEEE Transactions on Applied Superconductivity. 26, 4, 4001805.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Radiation properties of sources inside photonic crystals**

Bulu, I., Caglayan, H. & Ozbay, E., 15 May 2003, In : Physical Review B - Condensed Matter and Materials Physics. 67, 20

Research output: Contribution to journal › Article › Scientific › peer-review

### **Rapid and facile synthesis of graphene oxide quantum dots with good linear and nonlinear optical properties**

Sakho, E. H. M., Oluwafemi, O. S., Perumbilavil, S., Philip, R., Kala, M. S., Thomas, S. & Kalarikkal, N., 2016, In : Journal of Materials Science: Materials in Electronics. 27, 10, p. 10926–10933

Research output: Contribution to journal › Article › Scientific › peer-review

### **Rapid and sensitive detection of norovirus antibodies in human serum with a bilayer interferometry biosensor**

Auer, S., Koho, T., Uusi-Kerttula, H., Vesikari, T., Blazevic, V. & Hytönen, V. P., 31 Dec 2015, In : Sensors and Actuators B: Chemical. 221, p. 507-514 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Rational design of a printable, highly conductive silicone-based electrically conductive adhesive for stretchable radio-frequency antennas**

Li, Z., Le, T., Wu, Z., Yao, Y., Li, L., Tentzeris, M., Moon, K. S. & Wong, C. P., 21 Jan 2015, In : Advanced Functional Materials. 25, 3, p. 464-470 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

### **Realization of Free-Space Long-Distance Self-Healing Bessel Beams**

Vetter, C., Steinkopf, R., Bergner, K., Ornigotti, M., Nolte, S., Gross, H. & Szameit, A., 1 Oct 2019, In : Laser and Photonics Reviews. 13, 10, 1900103.

Research output: Contribution to journal › Article › Scientific › peer-review

**Real-time full-field characterization of transient dissipative soliton dynamics in a mode-locked laser**

Ryczkowski, P., Närhi, M., Billet, C., Merolla, J. M., Genty, G. & Dudley, J. M., 2018, In : *Nature Photonics*. 12, p. 221–227 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Refraction of nonlinear light beams in nematic liquid crystals**

Assanto, G., Smyth, N. F. & Xia, W., Sep 2012, In : *Journal of Nonlinear Optical Physics and Materials*. 21, 3, 1250033.

Research output: Contribution to journal > Article > Scientific > peer-review

**Relaxation behavior of densified sodium aluminoborate glass**

Veber, A., Smedskjaer, M. M. & de Ligny, D., 1 Oct 2020, In : *Acta Materialia*. 198, p. 153-167 15 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Residual stress development in cold sprayed Al, Cu and Ti coatings**

Suhonen, T., Varis, T., Dosta, S., Torrell, M. & Guilemany, J. M., Oct 2013, In : *Acta Materialia*. 61, 17, p. 6329-6337 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Resolving unoccupied electronic states with laser ARPES in bismuth-based cuprate superconductors**

Miller, T. L., Ärrälä, M., Smallwood, C. L., Zhang, W., Hafiz, H., Barbiellini, B., Kurashima, K., Adachi, T., Koike, Y., Eisaki, H., Lindroos, M., Bansil, A., Lee, D. H. & Lanza, A., 13 Feb 2015, In : *Physical Review B*. 91, 8, 5 p., 085109.

Research output: Contribution to journal > Article > Scientific > peer-review

**Restoring Integral Images from Focal Stacks Using Compressed Sensing Techniques**

Trujillo-Sevilla, J. M., Katkovnik, V., Javidi, B. & Rodríguez-Ramos, J. M., 1 Jul 2016, In : *Journal of Display Technology*. 12, 7, p. 701-706 6 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Reversible photodoping of TiO<sub>2</sub> nanoparticles**

Joost, U., Sutka, A., Oja, M., Smits, K., Doeblin, N., Loot, A., Järvekülg, M., Hirsimäki, M., Valden, M. & Nommeiste, E., 26 Dec 2018, In : *Chemistry of Materials*. 30, 24, p. 8968-8974

Research output: Contribution to journal > Article > Scientific > peer-review

**RF measurements to pinpoint defects in inkjet-printed, thermally and mechanically stressed coplanar waveguides**

Myllymäki, S., Putaala, J., Hannu, J., Kunnari, E. & Mäntysalo, M., 1 Oct 2016, In : *Microelectronics Reliability*. 65, p. 142-150 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Roadmap on optical rogue waves and extreme events**

Akhmediev, N., Kibler, B., Baronio, F., Belić, M., Zhong, W. P., Zhang, Y., Chang, W., Soto-Crespo, J. M., Vouzas, P., Grelu, P., Lecaplain, C., Hammani, K., Rica, S., Picozzi, A., Tlidi, M., Panajotov, K., Mussot, A., Bendahmane, A., Szriftgiser, P., Genty, G., Dudley, J., Kudlinski, A., Demircan, A., Morgner, U., Amiraranashvili, S., Bree, C., Steinmeyer, G., Masoller, C., Broderick, N. G. R., Runge, A. F. J., Erkintalo, M., Residori, S., Bortolozzo, U., Arecchi, F. T., Wabnitz, S., Tiofack, C. G., Coulibaly, S. & Taki, M., 1 Jun 2016, In : *Journal of Optics*. 18, 6, 063001.

Research output: Contribution to journal > Article > Scientific > peer-review

**Scalar diffraction field calculation from curved surfaces via Gaussian beam decomposition**

Şahin, E. & Onural, L., 1 Jul 2012, In : *Journal of the Optical Society of America A: Optics Image Science and Vision*. 29, 7 , p. 1459-1469 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Segregation of iron losses from rotational field measurements and application to electrical machine**

Belahcen, A., Rasilo, P. & Arkkio, A., Feb 2014, In : *IEEE Transactions on Magnetics*. 50, 2, 7022104.

Research output: Contribution to journal > Article > Scientific > peer-review

**Self-alignment in the stacking of microchips with mist-induced water droplets**

Chang, B., Sariola, V., Jääskeläinen, M. & Zhou, Q., Jan 2011, In : Journal of Micromechanics and Microengineering. 21, 1, 015016.

Research output: Contribution to journal > Article > Scientific > peer-review

**Self-alignment of RFID dies on four-pad patterns with water droplet for sparse self-assembly**

Chang, B., Routa, I., Sariola, V. & Zhou, Q., Sep 2011, In : Journal of Micromechanics and Microengineering. 21, 9, 095024.

Research output: Contribution to journal > Article > Scientific > peer-review

**Self-orienting liquid crystal doped with polymer-azo-dye complex**

Ouskova, E., Vapaavuori, J. & Kaivola, M., 1 Dec 2011, In : Optical Materials Express. 1, 8, p. 1463-1470 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Semantics of HTS AC Loss Modeling: Theories, Models, and Experiments**

Lahtinen, V. & Stenvall, A., 1 Aug 2020, In : IEEE Transactions on Applied Superconductivity. 30, 5, 5900809.

Research output: Contribution to journal > Article > Scientific > peer-review

**Sensitivity Analysis of Inverse Thermal Modeling to Determine Power Losses in Electrical Machines**

Nair, D. G., Rasilo, P. & Arkkio, A., Nov 2018, In : IEEE Transactions on Magnetics. 54, 11, 8109405.

Research output: Contribution to journal > Article > Scientific > peer-review

**Silver sulfide nanoclusters and the superatom model**

Goh, J-Q., Malola, S., Häkkinen, H. & Akola, J., 22 Jan 2015, In : Journal of Physical Chemistry C. 119, 3, p. 1583-1590 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Simulation of cluster growth using a lattice gas model**

Valkealahti, S. & Manninen, M., 1 Jan 1994, In : Physical Review B. 50, 23, p. 17564-17574 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Simulation studies of DFB laser longitudinal structures for narrow linewidth emission**

Virtanen, H., Uusitalo, T. & Dumitrescu, M., 23 Mar 2017, In : Optical and Quantum Electronics. 49, 4, 13 p., 160.

Research output: Contribution to journal > Article > Scientific > peer-review

**Single-source multibattery solar charger: Case study and implementation issues**

Gadelovits, S., Sitbon, M., Suntio, T. & Kuperman, A., 25 Nov 2015, In : Progress in Photovoltaics: Research and Applications. 23, 12, p. 1916-1928 13 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Soft graphoepitaxy for large area directed self-assembly of polystyrene-block-poly(dimethylsiloxane) block copolymer on nanopatterned POSS substrates fabricated by nanoimprint lithography**

Borah, D., Rasappa, S., Salaun, M., Zellsman, M., Lorret, O., Lontos, G., Ntetsikas, K., Avgeropoulos, A. & Morris, M. A., 1 Jun 2015, In : Advanced Functional Materials. 25, 22, p. 3425-3432 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Solar Irradiation Independent Expression for Photovoltaic Generator Maximum Power Line**

Kolesnik, S., Sitbon, M., Lineykin, S., Batzelis, E., Papathanassiou, S., Suntio, T. & Kuperman, A., 2017, In : IEEE Journal of Photovoltaics. 7, 5, p. 1416-1420

Research output: Contribution to journal > Article > Scientific > peer-review

**Soliton enhancement of spontaneous symmetry breaking**

Alberucci, A., Piccardi, A., Kravets, N., Buchnev, O. & Assanto, G., 2015, In : Optica. 2, 9, p. 783-789 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Stable blue phase polymeric Langmuir-Schaefer films based on unsymmetrical hydroxyalkadiynyl N-arylcaramate derivatives**

Alekseev, A., Ihlainen, P., Ivanov, A., Domnin, I., Rosqvist, E., Lemmetyinen, H., Vuorimaa-Laukkanen, E., Peltonen, J. & Vyz'min, S., 2018, In : *Thin Solid Films*. 645, p. 108-118 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Statistical analysis of E-jet print parameter effects on Ag-nanoparticle ink droplet size**

Laurila, M. M., Khorramdel, B., Dastpak, A. & Mäntysalo, M., 2 Aug 2017, In : *Journal of Micromechanics and Microengineering*. 27, 9, 095005.

Research output: Contribution to journal > Article > Scientific > peer-review

**Status of the Demonstrator Magnets for the EuCARD-2 Future Magnets Project**

Kirby, G., Rossi, L., Badel, A., Bajko, M., Ballarino, A., Bottura, L., Dhalle, M., Durante, M., Fazilleau, P., Fleiter, J., Goldacker, W., Häroö, E., Himbele, J., Kario, A., Langeslag, S., Lorin, C., Murtzomaki, J., Van Nugteren, J., De Rijk, G., Salmi, T., Senatore, C., Stenvall, A., Tixador, P., Usoskin, A., Volpini, G., Yang, Y. & Zangenberg, N., 1 Apr 2016, In : *IEEE Transactions on Applied Superconductivity*. 26, 3, 4003307.

Research output: Contribution to journal > Article > Scientific > peer-review

**Stimuli-Responsive Materials Based on Interpenetrating Polymer Liquid Crystal Hydrogels**

Stumpel, J. E., Gil, E. R., Spoelstra, A. B., Bastiaansen, C. W. M., Broer, D. J. & Schenning, A. P. H. J., 2015, In : *Advanced Functional Materials*. 25, 22, p. 3314–3320

Research output: Contribution to journal > Article > Scientific > peer-review

**Strand and cable R&D for fast cycled magnets at CERN**

Bottura, L., Bonasia, A., Borgnolotti, F., Gaertner, W., Le Naour, S., Oberli, L., Peiro, G., Richter, D., Salmi, T., Sikler, G. & Willering, G., Jun 2011, In : *IEEE Transactions on Applied Superconductivity*. 21, 3 PART 2, p. 2354-2358 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Structural and Electrical Characterization of Solution-Processed Electrodes for Piezoelectric Polymer Film Sensors**

Rajala, S., Mettänen, M. & Tuukkanen, S., 15 Mar 2016, In : *IEEE Sensors Journal*. 16, 6, p. 1692-1699 8 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Structure and in vitro dissolution of Mg and Sr containing borosilicate bioactive glasses for bone tissue engineering**

Tainio, J. M., Salazar, D. A. A., Nommeots-Nomm, A., Roiland, C., Bureau, B., Neuville, D. R., Brauer, D. S. & Massera, J., 1 Apr 2020, In : *Journal of Non-Crystalline Solids*. 533, 10 p., 119893.

Research output: Contribution to journal > Article > Scientific > peer-review

**Study of quench protection for the Nb<sub>3</sub>Sn low-β quadrupole for the LHC luminosity upgrade (HiLumi-LHC)**

Marinozzi, V., Ambrosio, G., Bellomo, G., Chlachidze, G., Felice, H., Marchevsky, M., Salmi, T., Sorbi, M. & Todesco, E., 1 Jun 2015, In : *IEEE Transactions on Applied Superconductivity*. 25, 3, 4002905.

Research output: Contribution to journal > Article > Scientific > peer-review

**Sub-100 ps monolithic diamond Raman laser emitting at 573 nm**

Nikkinen, J., Savitski, V., Reilly, S., Dziechciarczyk, L., Häkkinen, A., Kemp, A. & Guina, M., 2018, In : *IEEE Photonics Technology Letters*. 30, 11, p. 981-984

Research output: Contribution to journal > Article > Scientific > peer-review

**Sub-microwatt direct laser writing of fluorescent gold nanoclusters in polymer films**

Bitaranan, M. H., Suomala, S. & Toivonen, J., 2020, In : *Optical Materials Express*. 10, 1, p. 138-148 11 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Suitability of bundle approximation in AC loss analysis of NbTi wires: Simulations and experiment**

Lyly, M., Krooshoop, E., Lübkemann, R., Wessel, S., Stenvall, A., Dhalle, M. & Mikkonen, R., 1 Jun 2015, In : *IEEE Transactions on Applied Superconductivity*. 25, 3

Research output: Contribution to journal > Article > Scientific > peer-review

**Suitability of Different Quench Protection Methods for a 16 T Block-Type Nb<sub>3</sub>Sn Accelerator Dipole Magnet**  
Salmi, T., Prioli, M., Stenvall, A., Ruuskanen, J., Verweij, A. P., Auchmann, B. & Maranozzi, V., 1 Jun 2017, In : IEEE Transactions on Applied Superconductivity. 27, 4, 4702305.  
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**Superatom Model for Ag-S Nanocluster with Delocalized Electrons**  
Goh, J. Q. & Akola, J., 10 Sep 2015, In : Journal of Physical Chemistry C. 119, 36, p. 21165-21172 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Supercontinuum generation as a signal amplifier**  
Orsila, L., Sand, J., Närhi, M., Genty, G. & Steinmeyer, G., 2015, In : Optica. 2, 8, p. 757-764 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Superfluid weight and Berezinskii-Kosterlitz-Thouless transition temperature of twisted bilayer graphene**  
Julku, A., Peltonen, T. J., Liang, L., Heikkilä, T. T. & Törmä, P., 1 Feb 2020, In : Physical Review B. 101, 6, 060505.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Surface-induced charge state conversion of nitrogen-vacancy defects in nanodiamonds**  
Rondin, L., Dantelle, G., Slablab, A., Grosshans, F., Treussart, F., Bergonzo, P., Perruchas, S., Gacoin, T., Chaigneau, M., Chang, H. C., Jacques, V. & Roch, J. F., 28 Sep 2010, In : Physical Review B. 82, 11, 115449.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Surface-relief gratings and stable birefringence inscribed using light of broad spectral range in supramolecular polymer-bisazobenzene complexes**  
Koskela, J. E., Vapaavuori, J., Hautala, J., Priimagi, A., Faul, C. F. J., Kaivola, M. & Ras, R. H. A., 26 Jan 2012, In : Journal of Physical Chemistry C. 116, 3, p. 2363-2370 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Symmetry-broken electronic structure and uniaxial Fermi surface nesting of untwinned CaFe<sub>2</sub>As<sub>2</sub>**  
Wang, Q., Sun, Z., Rotenberg, E., Ronning, F., Bauer, E. D., Lin, H., Markiewicz, R. S., Lindroos, M., Barbiellini, B., Bansil, A. & Dessau, D. S., 26 Dec 2013, In : Physical Review B. 88, 23, 235125.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Temporal ghost imaging using wavelength conversion and two-color detection**  
Wu, H., Ryczkowski, P., Friberg, A. T., Dudley, J. M. & Genty, G., 20 Jul 2019, In : Optica. 6, 7, p. 902-906 5 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Test results of the LARP HQ02b magnet at 1.9 K**  
Bajas, H., Ambrosio, G., Anerella, M., Bajko, M., Bossert, R., Bottura, L., Caspi, S., Cheng, D., Chiuchiolo, A., Chlachidze, G., Dietderich, D., Felice, H., Ferracin, P., Feuvrerie, J., Ghosh, A., Giloux, C., Godeke, A., Hafalia, A. R., Marchevsky, M., Ravaioli, E., Sabbi, G. L., Salmi, T., Schmalzle, J., Todesco, E., Wanderer, P., Wang, X. & Yu, M., 1 Jun 2015, In : IEEE Transactions on Applied Superconductivity. 25, 3, 4003306.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Test Results of the LARP Nb<sub>3</sub>Sn Quadrupole HQ03a**  
DiMarco, J., Ambrosio, G., Anerella, M., Bajas, H., Chlachidze, G., Borgnolutti, F., Bossert, R., Cheng, D., Dietderich, D., Felice, H., Holik, T., Pan, H., Ferracin, P., Ghosh, A., Godeke, A., Hafalia, A. R., Marchevsky, M., Orris, D., Ravaioli, E., Sabbi, G., Salmi, T., Schmalzle, J., Stoynev, S., Strauss, T., Sylvester, C., Tartaglia, M., Todesco, E., Wanderer, P., Wang, X. & Yu, M., 1 Jun 2016, In : IEEE Transactions on Applied Superconductivity. 26, 4, 4005105.  
Research output: Contribution to journal > Article > Scientific > peer-review

**The 16 T Dipole Development Program for FCC**  
Tommasini, D., Auchmann, B., Bajas, H., Bajko, M., Ballarino, A., Bellomo, G., Benedikt, M., Bermudez, S. I., Bordini, B., Bottura, L., Buzio, M., Dhalle, M., Durante, M., De Rijk, G., Fabbricatore, P., Farinon, S., Ferracin, P., Gao, P., Lackner, F., Lorin, C., Maranozzi, V., Martinez, T., Munilla, J., Ogitsu, T., Ortwein, R., Perez, J., Prioli, M., Rifflet, J. M., Rochepault, E., Russenschuck, S., Salmi, T., Savary, F., Schoerling, D., Segreti, M., Senatore, C., Sorbi, M., Stenvall, A., Todesco, E., Toral, F., Verweij, A. P., Volpini, G., Wessel, S. & Wolf, F., 1 Jun 2017, In : IEEE Transactions on Applied Superconductivity. 27, 4, 4000405.

**The effect of carbon and nickel additions on the precursor synthesis of Cr<sub>3</sub>C<sub>2</sub>-Ni nanopowder**

Kaunisto, K., Kotilainen, M., Karhu, M., Lagerbom, J., Vuorinen, T., Honkanen, M., Vippola, M. & Turunen, E., 1 Jun 2018, In : Ceramics International. 44, 8, p. 9338-9346

Research output: Contribution to journal > Article > Scientific > peer-review

**The effects of laser patterning 10CeTZP-Al<sub>2</sub>O<sub>3</sub> nanocomposite disc surfaces: Osseous differentiation and cellular arrangement in vitro**

Goyos-Ball, L., Prado, C., Díaz, R., Fernández, E., Ismailov, A., Kumpulainen, T., Levänen, E., Torrecillas, R. & Fernández, A., Jun 2018, In : Ceramics International. 44, 8, p. 9472-9478

Research output: Contribution to journal > Article > Scientific > peer-review

**The EuCARD-2 future magnets European collaboration for accelerator-quality HTS magnets**

Rossi, L., Badel, A., Bajko, M., Ballarino, A., Bottura, L., Dhallé, M. M. J., Durante, M., Fazilleau, P., Fleiter, J., Goldacker, W., Härlöv, E., Kario, A., Kirby, G., Lorin, C., Van Nugteren, J., De Rijk, G., Salmi, T., Senatore, C., Stenvall, A., Tixador, P., Usoskin, A., Volpini, G., Yang, Y. & Zangenberg, N., 1 Jun 2015, In : IEEE Transactions on Applied Superconductivity. 25, 3, 4001007.

Research output: Contribution to journal > Article > Scientific > peer-review

**The EuCARD2 Future Magnets Program for particle accelerator high field dipoles: review of results and next steps**

Rossi, L., Badel, A., Bajas, H., Bajko, M., Ballarino, A., Barth, C., Betz, U., Bottura, L., Broggi, F., Chiuchiolo, A., Dhalle, M., Durante, M., Fazilleau, P., Fleiter, J., Gao, P., Goldacker, W., Kario, A., Kirby, G., Lorin, C., Murtomaeki, J. S., van Nugteren, J., Petrone, C., DeRijk, G., Senatore, C., Statera, M., Stenvall, A., Tixador, P., Yang, Y., Usoskin, A. & Zangenberg, N., Apr 2018, In : IEEE Transactions on Applied Superconductivity. 28, 3

Research output: Contribution to journal > Article > Scientific > peer-review

**The Impact of Protection Heater Delays Distribution on the Hotspot Temperature in a High-Field Accelerator Magnet**

Salmi, T. & Stenvall, A., 1 Jun 2016, In : IEEE Transactions on Applied Superconductivity. 26, 4, 4001405.

Research output: Contribution to journal > Article > Scientific > peer-review

**Theoretical studies of structural properties of the high-T<sub>c</sub> superconductor Y<sub>1</sub>Ba<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub>**

Valkealahti, S. & Welch, D. O., 1 Jan 1989, In : Physica C: Superconductivity and its Applications. 162-164, PART 1, p. 540-541 2 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**The red, purple and blue modifications of polymeric unsymmetrical hydroxyalkadiynyl-N-arylcarbamate derivatives in Langmuir-Schaefer films**

Alekseev, A., Ihlainen, P., Ivanov, A., Domnin, I., Klechkovskaya, V., Orekhov, A., Lemmetyinen, H., Vuorimaa-Laukkonen, E., Peltonen, J. & Vyaz'min, S., 1 Aug 2016, In : Thin Solid Films. 612, p. 463-471 9 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Thermal effects on the Wigner localization and Friedel oscillations in many-electron nanowires**

Kylänpää, I., Cavaliere, F., Ziani, N. T., Sassetti, M. & Räsänen, E., 13 Sep 2016, In : Physical Review B. 94, 11, 115417.

Research output: Contribution to journal > Article > Scientific > peer-review

**Thermal evaporation of Ge on Si for near infrared detectors: Material and device characterization**

Sorianello, V., Colace, L., Assanto, G., Notargiacomo, A., Armani, N., Rossi, F. & Ferrari, C., Apr 2011, In : Microelectronic Engineering. 88, 4, p. 526-529 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Thermally evaporated single-crystal Germanium on Silicon**

Sorianello, V., Colace, L., Nardone, M. & Assanto, G., 1 Sep 2011, In : Thin Solid Films. 519, 22, p. 8037-8040 4 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Thermal, structural and optical properties of Er<sup>3+</sup> doped phosphate glasses containing silver nanoparticles**  
Soltani, I., Hraiech, S., Horchani-Naifer, K., Massera, J., Petit, L. & Férid, M., 15 Apr 2016, In : Journal of Non-Crystalline Solids. 438, p. 67-73 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**The sensitivity of random polymer brush-lamellar polystyrene-b-polymethylmethacrylate block copolymer systems to process conditions**  
Borah, D., Rasappa, S., Senthamaraiyan, R., Shaw, M. T., Holmes, J. D. & Morris, M. A., 1 Mar 2013, In : Journal of Colloid and Interface Science. 393, 1, p. 192-202 11 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Third order nonlinear optical response of TTF-based molecular corners**  
Iliopoulos, K., Czaplicki, R., Ouazzani, H. E., Balandier, J-Y., Chas, M., Goeb, S., Sallé, M., Gindre, D. & Sahraoui, B., 2012, In : Nonlinear Optics, Quantum Optics. 43, 1-4, p. 205-212 8 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Three-color vector nematicon**  
Laudyn, U. A., Kwaśny, M., Karpierz, M. A. & Assanto, G., 2017, In : Photonics Letters of Poland. 9, 2, p. 36-38 3 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Towards REBCO 20T+ Dipoles for Accelerators**  
van Nugteren, J., Kirby, G., Murtomaki, J., DeRijk, G., Rossi, L. & Stenvall, A., Jun 2018, In : IEEE Transactions on Applied Superconductivity. 28, 4, 4008509.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Towards universal enrichment nanocoating for IR-ATR waveguides**  
Giammarco, J., Zdyrko, B., Petit, L., Musgraves, J. D., Hu, J., Agarwal, A., Kimerling, L., Richardson, K. & Luzinov, I., 28 Aug 2011, In : Chemical Communications. 47, 32, p. 9104-9106 3 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Transmission, refraction, and focusing properties of labyrinth based left-handed metamaterials**  
Özbay, E., Bulu, I. & Caglayan, H., Apr 2007, In : Physica Status Solidi (B) Basic Research. 244, 4, p. 1202-1210 9 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Transparent Yb<sup>3+</sup> doped phosphate glass-ceramics**  
Hongisto, M., Veber, A., Boetti, N. G., Danto, S., Jubera, V. & Petit, L., 1 Jan 2020, In : Ceramics International.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Transverse deformation of a lamellar TiAl alloy at high temperature by in situ microcompression**  
Edwards, T. E. J., Di Gioacchino, F., Goodfellow, A. J., Mohanty, G., Wehrs, J., Michler, J. & Clegg, W. J., 1 Mar 2019, In : Acta Materialia. 166, p. 85-99 15 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Tunable topological domain wall states in engineered atomic chains**  
Huda, M. N., Kezilebieke, S., Ojanen, T., Drost, R. & Liljeroth, P., 2020, In : npj Quantum Materials. 5, 1, 5 p., 17.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Tuning electronic properties of graphene heterostructures by amorphous-to-crystalline phase transitions**  
Kulju, S., Akola, J., Prendergast, D. & Jones, R. O., 31 May 2016, In : Physical Review B. 93, 19, 8 p., 195443.  
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**Two cations, two mechanisms: Interactions of sodium and calcium with zwitterionic lipid membranes**  
Javanainen, M., Melcrová, A., Magarkar, A., Jurkiewicz, P., Hof, M., Jungwirth, P. & Martínez-Seara, H., 2017, In : Chemical Communications. 53, 39, p. 5380-5383 4 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Two-time coherence of pulse trains and the integrated degree of temporal coherence**

Dutta, R., Friberg, A. T., Genty, G. & Turunen, J., 2015, In : Journal of the Optical Society of America A: Optics Image Science and Vision. 32, 9, p. 1631-1637 7 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Ultrahigh-pressure form of Si O<sub>2</sub> glass with dense pyrite-type crystalline homology**

Murakami, M., Kohara, S., Kitamura, N., Akola, J., Inoue, H., Hirata, A., Hiraoka, Y., Onodera, Y., Obayashi, I., Kalikka, J., Hirao, N., Musso, T., Foster, A. S., Idemoto, Y., Sakata, O. & Ohishi, Y., 29 Jan 2019, In : Physical Review B. 99, 4, 045153.

Research output: Contribution to journal > Article > Scientific > peer-review

**Unveiling and controlling the electronic structure of oxidized semiconductor surfaces: Crystalline oxidized InSb(100)(1 × 2)-O: Crystalline oxidized InSb(100)(1 × 2)-O**

Lång, J. J. K., Punkkinen, M. P. J., Tuominen, M., Hedman, H. P., Vähä-Heikkilä, M., Polojärvi, V., Salmi, J., Korpijärvi, V. M., Schulte, K., Kuzmin, M., Punkkinen, R., Laukkanen, P., Guina, M. & Kokko, K., 29 Jul 2014, In : Physical Review B. 90, 4, p. 1-9 9 p., 045312.

Research output: Contribution to journal > Article > Scientific > peer-review

**Utilizing triangular mesh with MMEV to study hysteresis losses of round superconductors obeying critical state model**

Ruuskanen, J., Stenvall, A. & Lahtinen, V., 1 Jun 2015, In : IEEE Transactions on Applied Superconductivity. 25, 3, 8200405.

Research output: Contribution to journal > Article > Scientific > peer-review

**Very high dose electron irradiation effects on photoluminescence from GaInNAs/GaAs quantum wells grown by molecular beam epitaxy**

Pavelescu, E. M., Bălțăteanu, N., Spănulescu, S. I. & Arola, E., 1 Feb 2017, In : Optical Materials. 64, p. 361-365 5 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Vortex stabilization by means of spatial solitons in nonlocal media**

Izdebskaya, Y., Krolikowski, W., Smyth, N. F. & Assanto, G., 1 May 2016, In : Journal of Optics. 18, 5, 054006.

Research output: Contribution to journal > Article > Scientific > peer-review

**Wetting hysteresis induced by temperature changes: Supercooled water on hydrophobic surfaces**

Heydari, G., Sedighi Moghaddam, M., Tuominen, M., Fielden, M., Haapanen, J., Mäkelä, J. M. & Claesson, P. M., 15 Apr 2016, In : Journal of Colloid and Interface Science. 468, p. 21-33 13 p.

Research output: Contribution to journal > Article > Scientific > peer-review

**Toward Graphene-Based Passive UHF RFID Textile Tags: A Reliability Study**

Akbari, M., Virkki, J., Sydänheimo, L. & Ukkonen, L., 1 Sep 2016, In : IEEE Transactions on Device and Materials Reliability. 16, 3, p. 429-431 3 p.

Research output: Contribution to journal > Letter > Scientific > peer-review

**Nonlinear optics applications: In memory of George I. Stegeman**

Assanto, G., 2016, In : Photonics Letters of Poland. 8, 1, p. 1 1 p.

Research output: Contribution to journal > Editorial > Scientific

**Novel optical and photonic devices based on 2D materials: Feature issue introduction**

Luo, Z., Bao, Q., Caglayan, H., Jia, B. & Zhang, H., 2020, In : Optical Materials Express. 10, 6, p. 1344-1345 2 p.

Research output: Contribution to journal > Editorial > Scientific

**Special Issue: Mid-infrared optical materials and their device applications**

Hu, J. (ed.), Mawst, L. (ed.), Moss, S. (ed.), Petit, L. (ed.) & Ting, D. (ed.), 2018, In : Optical Materials Express. 8, 7

Research output: Contribution to journal > Special issue > Scientific > peer-review

**Special Issue: Novel Optical and Photonic Devices based on 2D Materials**

Luo, Z. (ed.), Bao, Q. (ed.), Caglayan, H. (ed.), Jia, B. (ed.) & Zhang, H. (ed.), 2020, In : Optical Materials Express. 10, 6 Research output: Contribution to journal › Special issue › Scientific › peer-review

**Coherence of Supercontinuum Light**

Genty, G., Friberg, A. T. & Turunen, J., 2016, *Progress in Optics*. Elsevier, Vol. 61. (Progress in Optics). Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

**1180nm VECSEL with 50 W output power**

Kantola, E., Leinonen, T., Ranta, S., Tavast, M., Penttinen, J-P. & Guina, M., 2015, *Proceedings of SPIE - The International Society for Optical Engineering*. SPIE, Vol. 9349. 93490U

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**13.5 A 0.35-to-2.6GHz multilevel outphasing transmitter with a digital interpolating phase modulator enabling up to 400MHz instantaneous bandwidth**

Kosunen, M., Lemberg, J., Martelius, M., Roverato, E., Nieminen, T., Englund, M., Stadius, K., Anttila, L., Pallonen, J., Valkama, M. & Ryyynänen, J., 2 Mar 2017, *2017 IEEE International Solid-State Circuits Conference, ISSCC 2017*. IEEE, p. 224-225 2 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**1.3μm U-bend traveling wave SOA devices for high efficiency coupling to silicon photonics**

Viheriälä, J., Tuorila, H., Zia, N., Cherchi, M., Aalto, T. & Guina, M., 2019, *Silicon Photonics XIV*. Reed, G. T. & Knights, A. P. (eds.). SPIE, IEEE, 109230E. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10923). Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**1.55-μm wavelength wafer-fused OP-VECSELs in flip-chip configuration**

Mereuta, A., Nechay, K., Caliman, A., Suruceanu, G., Gallo, P., Guina, M. & Kapon, E., 2019, *Vertical External Cavity Surface Emitting Lasers (VECSELs) IX*. Keller, U. (ed.). SPIE, IEEE, 1090103. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10901).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**2-volt Solution-Processed, Indium Oxide ( $\text{In}_2\text{O}_3$ ) Thin Film Transistors on flexible Kapton**

Bhalerao, S. R., Lupo, D. & Berger, P. R., 1 Aug 2019, *2019 IEEE International Flexible Electronics Technology Conference, IFETC 2019*. IEEE, 3 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**405-nm pumped  $\text{Ce}^{3+}$ -doped silica fiber for broadband fluorescence from cyan to red**

Yadav, A., Chichkov, N. B., Gumenyuk, R., Zherebtsov, E., Melkumov, M. A., Yashkov, M. V., Dianov, E. M. & Rafailov, E. U., 2019, *Optical Components and Materials XVI*. Digonnet, M. J. F. & Jiang, S. (eds.). SPIE, IEEE, 1091406. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10914).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**73-fs SESAM mode-locked Tm,Ho:CNGG laser at 2061 nm**

Wang, Y., Zhao, Y., Pan, Z., Suomalainen, S., Häkkinen, A., Guina, M., Griebner, U., Wang, L., Loiko, P., Mateos, X., Chen, W. & Petrov, V., 2020, *Solid State Lasers XXIX: Technology and Devices*. Clarkson, W. A. & Shori, R. K. (eds.). SPIE, 1125929. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 11259).

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**Action recognition using the 3D dense microblock difference**

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**Advancements in Solution Processable Devices using Metal Oxides For Printed Internet-of-Things Objects**

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**Advances in implantable and wearable antennas for wireless brain-machine interface systems**

Moradi, E., Koski, K., Björninen, T., Muller, R., Ledochowitsch, P., Sydänheimo, L., Alon, E., Maharbiz, M. M., Rabaey, J. M., Ukkonen, L. & Rahmat-Samii, Y., 16 Oct 2014, *2014 United States National Committee of URSI National Radio Science Meeting, USNC-URSI NRSN 2014*. Institute of Electrical and Electronics Engineers Inc., 6928137

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**A genetic algorithm for scheduling tasks onto dynamically reconfigurable hardware**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Sand, A. & Rakkolainen, I., 2014, *Proceedings of SPIE-IS and T Electronic Imaging - Stereoscopic Displays and Applications XXV*. SPIE, Vol. 9011. 9011Q

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**All-fiber, high-power, picosecond Yb double clad tapered fiber amplifier**

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**Alpha radiation induced luminescence in solar blind spectral region**

Kerst, T. & Toivonen, J., 2018, *CLEO: Applications and Technology, CLEO\_AT 2018*. OSA - The Optical Society

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**A membrane external-cavity surface-emitting laser (MECSEL) with emission around 825 nm**

Phung, H. M., Kahle, H., Penttinen, J-P., Rajala, P., Ranta, S. & Guina, M., 2020, *Vertical External Cavity Surface Emitting Lasers (VECSELs) X*. Hastie, J. E. (ed.). SPIE, 112630H. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 11263).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**A method for predicting DCT-based denoising efficiency for grayscale images corrupted by AWGN and additive spatially correlated noise**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**A multi-band WCDMA SAW-less receivers with frequency selective feedback loop**

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**Anisotropic ultra-large mode area Yb-doped tapered double clad fiber for ultrafast amplifiers**

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**A novel 3-D printed loop antenna using flexible NinjaFlex material for wearable and IoT applications**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**A novel strain sensor based on 3D printing technology and 3D antenna design**

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**Antenna design considerations for far field and near field wireless body-centric systems**

Moradi, E., Koski, K., Hasani, M., Rahmat-Samii, Y. & Ukkonen, L., 2 Mar 2015, *ICCEM 2015 - 2015 IEEE International Conference on Computational Electromagnetics*. The Institute of Electrical and Electronics Engineers, Inc., p. 59-60 2 p. 7052555

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**A perceptual quality metric for high-definition stereoscopic 3D video**

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**Artificial intelligence yesterday, today and tomorrow**

Jaakkola, H., Henno, J., Mäkelä, J. & Thalheim, B., 1 May 2019, *2019 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics, MIPRO 2019 - Proceedings*. Skala, K., Car, Z., Pale, P., Huljenic, D., Janjic, M., Koricic, M., Sruk, V., Ribaric, S., Grbac, T. G., Butkovic, Z., Cicin-Sain, M., Skvorc, D., Mauher, M., Babic, S., Gros, S., Vrdoljak, B. & Tijan, E. (eds.). IEEE, p. 860-867 8 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**ATM switch for 2.488 Gbit/s CATV network on FPGA with a high-throughput buffering architecture**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Back Reflector with Diffractive Gratings for Light-Trapping in Thin-Film III-V Solar Cells**

Aho, T., Tukiainen, A., Elsehrawy, F., Ranta, S., Raappana, M., Aho, A., Isoaho, R., Cappelluti, F. & Guina, M., 2019, *2019 European Space Power Conference (ESPC)*. IEEE, 4 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Backscattering-based wireless communication and power transfer to small biomedical implants**

Ukkonen, L., Sydänheimo, L., Ma, S. & Björninen, T., 2020, *Microfluidics, BioMEMS, and Medical Microsystems XVIII*. Gray, B. L. & Becker, H. (eds.). SPIE, 112350A. (Progress in Biomedical Optics and Imaging - Proceedings of SPIE; vol. 11235).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Benchmarking of several disparity estimation algorithms for light field processing**

Zakeri, F. S., Bätz, M., Jaschke, T., Keinert, J. & Chuchvara, A., 2019, *Fourteenth International Conference on Quality Control by Artificial Vision*. Bazeille, S., Verrier, N. & Cudel, C. (eds.). SPIE, IEEE, 111721C. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 11172).

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**Bistable optical propagation in nematic liquid crystals**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Combining full-reference image visual quality metrics by neural network**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Complex-domain sparse imaging in terahertz pulse time-domain holography with balance detection**

Kulya, M. S., Katkovnik, V., Egiazarian, K. & Petrov, N. V., 2020, *Terahertz, RF, Millimeter, and Submillimeter-Wave Technology and Applications XIII*. Sadwick, L. P. & Yang, T. (eds.). SPIE, 1127921. (Proceedings of SPIE; vol. 11279).

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**Compressive strain measurement using RFID patch antenna sensors**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Computational wavelength resolution for in-line lensless holography: Phase-coded diffraction patterns and wavefront group-sparsity**

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**Continuous-wave, cascaded raman laser at 1.3, 1.5, and 1.7 μm**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Cyclic quantum walks: Photonic realization and decoherence analysis**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Depth map occlusion filling and scene reconstruction using modified exemplar-based inpainting**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Design and simulation of a slotted patch antenna sensor for wireless strain sensing**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Design, Fabrication, and Wireless Evaluation of a Passive 3D-printed Moisture Sensor on a Textile Substrate**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Development of efficient electrically pumped nanolasers based on InAlGaAs tunnel junction**

Fang, C. Y., Vallini, F., Amili, A. E., Tukiainen, A., Lyytikäinen, J., Guina, M. & Fainman, Y., 2018, *CLEO: Science and Innovations, CLEO\_SI 2018*. OSA - The Optical Society

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Dilute nitride SOAs for high-speed data processing in variable temperature conditions**

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**Directional random laser by combining cavity-less lasing and spatial solitons in liquid crystals**

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**Double-asymmetric-structure 1.5 μ m high power laser diodes**

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Effect of Epoxy Flux Underfill on Thermal Cycling Reliability of Sn-8Zn-3Bi Lead-Free Solder in a Sensor Application**

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**Evaluating transparent liquid screen overlay as a haptic conductor: Method of enhancing touchscreen based user interaction by a transparent deformable liquid screen overlay**

Farooq, A., Evreinov, G., Raisamo, R. & Takahata, D., 31 Dec 2015, *2015 IEEE SENSORS - Proceedings*. Institute of Electrical and Electronics Engineers Inc., 7370186

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Fabrication Challenges in Embedding of Components and Embroidered Conductors into 3D-printed Textile Electronics Structures**

Khan, Z., He, H., Chen, X., Ukkonen, L. & Virkki, J., 1 Jun 2019, *2019 Photonics and Electromagnetics Research Symposium - Spring, PIERS-Spring 2019 - Proceedings*. IEEE, p. 1372-1377 6 p. 9017223. (Progress in Electromagnetics Research Symposium; vol. 2019-June).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Fluorescence bandwidth of 280nm from broadband Ce<sup>3+</sup>-doped silica fiber pumped with blue laser diode**

Yadav, A., Chichkov, N. B., Gumennyuk, R., Zherebtsov, E., Melkumov, M. A., Yashkov, M. V., Dianov, E. M. & Rafailov, E. U., 13 Aug 2018, *2018 International Conference Laser Optics (ICLO)*. IEEE, p. 133-133 1 p. 8435861

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Frequency Comb Generation in a Continuous-Wave Pumped Second-Order Nonlinear Waveguide Resonator**

Abdallah, Z., Stefszky, M., Ulvila, V., Silberhorn, C. & Vainio, M., 1 May 2019, *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Frequency-doubled VECSEL employing a Volume Bragg Grating for linewidth narrowing**

Kantola, E., Penttinen, J-P., Leinonen, T., Ranta, S. & Guina, M., 2018, *CLEO: Applications and Technology, CLEO\_AT 2018*. OSA - The Optical Society

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Frequency-doubled wafer-fused 638 nm VECSEL with an output power of 5.6 W**

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**Germanium-on-glass solar cells**

Colace, L., Sorianello, V., Maragliano, C., Assanto, G., Fulgoni, D., Nash, L. & Palmer, M., 2011, *8th IEEE International Conference on Group IV Photonics, GFP 2011*. p. 255-257 3 p. 6053781

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Green (In,Ga,Al)P-GaP light-emitting diodes grown on high-index GaAs surfaces**

Ledentsov, N. N., Shchukin, V. A., Lytykäinen, J., Okhotnikov, O., Cherkashin, N. A., Shernyakov, Y. M., Payusov, A. S., Gordeev, N. Y., Maximov, M. V., Schlichting, S., Nippert, F. & Hoffmann, A., 2015, *Proceedings of SPIE: Light-Emitting*

**>8W GaInNAs VECSEL emitting at 615 nm**

Leinonen, T., Penttinen, J. P., Korpiläivi, V. M., Kantola, E. & Guina, M., 2015, *Proceedings of SPIE: Vertical External Cavity Surface Emitting Lasers (VECSELS) V*. SPIE, Vol. 9349. 934909

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Highly-efficient Ho:KY(WO<sub>4</sub>)<sub>2</sub> thin-disk lasers at 2.06 μm**

Mateos, X., Loiko, P., Lamrini, S., Scholle, K., Fuhrberg, P., Suomalainen, S., Häkkinen, A., Guina, M., Vatnik, S., Vedin, I., Aguiló, M., Diáz, F., Wang, Y., Griebner, U. & Petrov, V., 2018, *Pacific-Rim Laser Damage 2018: Optical Materials for High-Power Lasers*. SPIE, IEEE, 107130J. (Proceedings of SPIE; vol. 10713).

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**High performance GaSb superluminescent diodes for tunable light source at 2 μm and 2.55 μm**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**High-power 1550 nm tapered DBR lasers fabricated using soft UV-nanoimprint lithography**

Viheriälä, J., Aho, A. T., Mäkelä, J., Salmi, J., Virtanen, H., Leinonen, T., Dumitrescu, M. & Guina, M., 2016, *High-Power Diode Laser Technology and Applications XIV*. SPIE, 7 p. 97330Q. (SPIE Conference Proceedings; vol. 9733).

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**High-Q resonance train in a plasmonic metasurface**

Saad-Bin-Alam, M., Reshef, O., Huttunen, M. J., Carlow, G., Sullivan, B., Menard, J. M., Dolgaleva, K. & Boyd, R. W., 1 May 2019, *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE

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**Inkjet-printed dual microfluidic-based sensor integrated system**

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**Interstitial photodynamic therapy and glioblastoma: Light fractionation study on a preclinical model: Preliminary results**

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**Light propagation analysis in nervous tissue for wireless optogenetic nanonetworks**

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**Localization of light at vanishingly small disorder-levels with heavy photons**

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**Maintenance-free moisture sensor on dishcloth substrate**

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**Measuring bend losses in large-mode-area fibers**

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**MECSELs with direct emission in the 760 nm to 810 nm spectral range: A single- and double-side pumping comparison and high-power continuous-wave operation**

Kahle, H., Penttinen, J. P., Phung, H. M., Rajala, P., Tukiainen, A., Ranta, S. & Guina, M., 2019, *Vertical External Cavity Surface Emitting Lasers (VECSELs) IX*. Keller, U. (ed.). SPIE, IEEE, 109010D. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10901).

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### Monolithic GaInNAsSb/GaAs VECSEL emitting at 1550 nm

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### Nanoparticles in optical waveguides: A toolbox to promote lasers, amplifiers and sensors

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### Noise measurements from reconstructed digital breast tomosynthesis

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**Novel enhancement techniques for ultra-high-performance conformal wireless sensors and 'smart skins' utilizing inkjet-printed graphene**

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**Observation of local electroluminescent cooling and identifying the remaining challenges**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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**Performance of Solar Cell Grids based on Ag, Au, and Al for Cost-Effective Manufacturing**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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**Propagation dynamics of ultrabroadband terahertz beams with orbital angular momentum for wireless data transfer**

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**Pulsed high-power yellow-orange VECSEL**

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**Quantum-well Laser Emitting at 1.2  $\mu\text{m}$ -1.3  $\mu\text{m}$  Window Monolithically Integrated on Ge Substrate**

Guina, M., Isoaho, R., Viheriälä, J., Aho, A., Aho, A. & Tukiainen, A., 24 Apr 2018, *43rd European Conference on Optical Communication, ECOC 2017*. IEEE, p. 1-3 3 p.

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Real-time measurements of nonlinear instabilities in optical fibers**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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**Reliability of ACA interconnections on microvia HDI PCBs in thermal cycling conditions**

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**RFDNA: A wireless authentication system on flexible substrates**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Screen printed temporary tattoos for skin-mounted electronics**

Tuominen, S. & Mäntysalo, M., 1 May 2019, *IEEE 69th Electronic Components and Technology Conference, ECTC 2019*. IEEE, p. 1252-1257 6 p.

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**SESAM mode-locked Tm: CALGO laser at 2  $\mu\text{m}$** 

Wang, Y., Xie, G., Xu, X., Di, J., Qin, Z., Suomalainen, S., Guina, M., Härkönen, A., Agnesi, A., Griebner, U., Mateos, X., Loiko, P. & Petrov, V., 2015, *Advanced Solid State Lasers, ASSL 2015*. Optical Society of America OSA, AW1A.2

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Short-range supercontinuum based lidar for combustion diagnostics**

Saleh, A., Ryczkowski, P., Genty, G. & Toivonen, J., 2019, *SPIE Future Sensing Technologies*. Kimata, M. & Valenta, C. R. (eds.). SPIE, IEEE, 111970Y. (Proceedings of SPIE; vol. 11197).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Simulation of photon-photon resonance enhanced direct modulation bandwidth of DFB lasers**

Dumitrescu, M., Uusitalo, T., Virtanen, H., Laakso, A., Bardella, P. & Montrosset, I., 17 Aug 2016, *16th International Conference on Numerical Simulation of Optoelectronic Devices, NUSOD 2016*. IEEE, p. 147-148 2 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Simulation studies of DFB laser longitudinal structures for narrow linewidth emission**

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**Simultaneous binary hash and features learning for image retrieval**

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**Single exposure lensless subpixel phase imaging**

Kocsis, P., Shevkunov, I., Katkovnik, V. & Egiazarian, K., 2019, *Digital Optical Technologies 2019*. Kress, B. C. & Schelkens, P. (eds.). SPIE, IEEE, 9 p. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 11062).

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**Single KTiOPO<sub>4</sub> nanocrystals for nonlinear probing of local optical fields and interaction with a metallic nanostructure**

Slablab, A., Le Xuan, L., Zhou, C., Chauvat, D., De Wilde, Y., Perruchas, S., Tard, C., Gacoin, T., Villeval, P. & Roch, J. F., 2009, *CLEO/Europe - EQEC 2009 - European Conference on Lasers and Electro-Optics and the European Quantum Electronics Conference*. 5192089

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**Site-controlled InAs Quantum Dots for Plasmonics**

Hakkarainen, T., Tommila, J., Schramm, A., Simonen, J., Niemi, T., Strelow, C., Kipp, T., Kontio, J. & Guina, M., 2016, *Conference on Lasers and Electro-Optics 2016: QELS\_Fundamental Science*. OSA - The Optical Society, FM1B.3

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Strong localization in unintentional disordered photonics crystal waveguides**

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**Study of second-harmonic generation from CdS nanostructured thin film**

Mathew, S., Koskinen, K., Czaplicki, R., Pradeep, C., Kailasnath, M., GVallabhan, C. P., Kauranen, M. & Radhakrishnan, P., 19 Dec 2014, *12th International Conference on Fiber Optics and Photonics*. Optical Society of America (OSA), 4 p. M4A.46

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Sub-100 fs pulse generation from a Tm,Ho: CALYO laser mode-locked by a GaSb-based SESAM at ~2043 nm**

Zhao, Y., Wang, Y., Zhang, X., Mateos, X., Pan, Z., Loiko, P., Zhou, W., Xu, X., Xu, J., Shen, D., Suomalainen, S., Häkkinen, A., Guina, M., Griebner, U. & Petrov, V., 1 Jan 2018, *CLEO: Science and Innovations, CLEO\_SI 2018*. OSA - The Optical Society

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Sub-10 optical-cycle mode-locked Tm:(Lu<sub>2/3</sub>Sc<sub>1/3</sub>)<sub>2</sub>O<sub>3</sub> mixed ceramic laser at 2057 nm**

Wang, Y., Jing, W., Loiko, P., Zhao, Y., Huang, H., Suomalainen, S., Häkkinen, A., Guina, M., Mateos, X., Griebner, U. & Petrov, V., 2017, *Advanced Solid State Lasers 2017: Nagoya, Aichi Japan 1-5 October 2017*. The Optical Society; OSA, 3 p. ATu6A.4

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**Sub-parts-per-trillion sensitivity in trace gas detection by cantilever-enhanced photo-acoustic spectroscopy**

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**Switchable unidirectional second-harmonic emission through GaAs nanoantennas**

Xu, L., Saerens, G., Timofeeva, M., Miroshnichenko, A. E., Camacho-Morales, R., Volkovskaya, I., Smirnova, D. A., Lysevych, M., Huang, L., Cai, M., Karouta, F., Hoe Tan, H., Kauranen, M., Jagadish, C., Grange, R., Neshev, D. N. & Rahmani, M., 2019, *AOS Australian Conference on Optical Fibre Technology, ACOFT 2019 and Australian Conference on Optics, Lasers, and Spectroscopy, ACOLS 2019*. Mitchell, A. & Rubinsztein-Dunlop, H. (eds.). SPIE, 112000J. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 11200).

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**Tailoring directional scattering of second-harmonic generation from (111)-GaAs nanoantennas**

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**Thermal effects on a passive wireless antenna sensor for strain and crack sensing**

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**Transverse structure optimization of laterally-coupled ridge waveguide DFB lasers**

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**Tunable Reflection Type Plasmon Induced Transparency with Graphene**

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**Ultrafast picosecond MOPA with Yb-doped tapered double clad fiber**

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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**Surface topography studied by off-axis digital holography**

Achimova, E., Abaskin, V., Cazac, V., Meshalkin, A., Pedrini, G., Claus, D., Shevkunov, I. & Katkovnik, V., 2018, *Novel Optical Materials and Applications, NOMA 2018*. OSA - The Optical Society, Vol. Part F107-NOMA 2018.

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Research output: Other conference contribution › Paper, poster or abstract › Scientific

**Advanced scheme of amplifier similariton laser**

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**Finite element method incorporating coupled magneto-elastic model for magneto-mechanical energy harvester**

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**State of polarization in anisotropic tapered fiber with extremely large core diameter**

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