

First principles prediction of the solar cell efficiency of chalcopyrite materials 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.

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

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

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 > Article > Scientific > peer-review

Observation of PT-symmetric quantum interference

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

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

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

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

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

AlGaAs/AlGaInP 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 > Article > Scientific > peer-review

Exploration of Two Layer Nb_3Sn 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

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

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

0.6V threshold voltage thin film transistors with solution processable indium oxide (In_2O_3) Channel and Anodized High-k Al_2O_3 Dielectric

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

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

Investigating human skin using deep learning enhanced multiphoton microscopy

Huttunen, M. J., Hristu, R., Dumitru, A., Costache, M. & Stanciu, S. G., 1 Jul 2019, *21st International Conference on Transparent Optical Networks, ICTON 2019*. IEEE, (International Conference on Transparent Optical Networks).
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

Blanc, W., Vermillac, M., Petit, L., Lukowiak, A., Lu, Z., Mady, F., Benabdesselam, M., Chaussedent, S., Mehdi, A. & Ferrari, M., 1 Jul 2019, *21st International Conference on Transparent Optical Networks, ICTON 2019*. IEEE, (International Conference on Transparent Optical Networks).
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Persistent luminescent glasses prepared using the direct doping method

Aryal, U., Ojha, N., Trautvetter, T., Lastusaari, M., Ueda, J., Mueller, R., Veber, A. & Petit, L., 1 Jul 2019, *21st International Conference on Transparent Optical Networks, ICTON 2019*. IEEE, (International Conference on Transparent Optical Networks).
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Real-time measurements of ultrafast instabilities in nonlinear fiber optics: Recent advances

Dudley, J. M., Ryzkowski, P., Närhi, M., Billet, C., Merolla, J. M., Lapre, C., Meng, F., Lacourt, P. A. & Genty, G., 1 Jul 2019, *21st International Conference on Transparent Optical Networks, ICTON 2019*. IEEE, (International Conference on Transparent Optical Networks).
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Towards efficient nonlinear plasmonic metasurfaces

Huttunen, M. J., Stolt, T., Reshef, O., Kiviniemi, A., Czaplicki, R., Zang, X., Vartiainen, I., Butet, J., Kuittinen, M., Martin, O. J. F., Dolgaleva, K., Boyd, R. W. & Kauranen, M., 1 Jul 2019, *21st International Conference on Transparent Optical Networks, ICTON 2019*. IEEE, (International Conference on Transparent Optical Networks).
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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.
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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

Multistep Bloch-line-mediated Walker breakdown in ferromagnetic strips

Hütner, J., Herranen, T. & Laurson, L., 24 May 2019, In : *Physical Review B*. 99, 17, 174427.
Research output: Contribution to journal > Article > Scientific > peer-review

Artificial intelligence yesterday, today and tomorrow

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

Double-side pumped membrane external-cavity surface-emitting laser (MECSEL) with increased efficiency emitting > 3 W in the 780 nm region

Kahle, H., Phung, H-M., Penttinen, J-P., Rajala, P., Tukiainen, A., Ranta, S. & Guina, M., 1 May 2019, *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE
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Frequency Comb Generation in a Continuous-Wave Pumped Second-Order Nonlinear Waveguide Resonator

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

GaNAsSb/AlGa(In)AsSb type I quantum wells emitting in 3 μ 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

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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Intelligent data service for farmers

Linna, P., Narra, N. & Grönman, J., 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., Koracic, 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. 1072-1075 4 p.

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Screen printed temporary tattoos for skin-mounted electronics

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Teaching for virtual work

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

Engineering of Chern insulators and circuits of topological edge states

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

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

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

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

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

Ultrahigh-pressure form of Si O₂ glass with dense pyrite-type crystalline homology

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

Deformation of lamellar γ -TiAl below the general yield stress

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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 > 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

1.3 μ m U-bend traveling wave SOA devices for high efficiency coupling to silicon photonics

Viherialä, 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- μ m wavelength wafer-fused OP-VECSELs in flip-chip configuration

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

405-nm pumped Ce³⁺-doped silica fiber for broadband fluorescence from cyan to red

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Benchmarking of several disparity estimation algorithms for light field processing

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

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).

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

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

On the limit of superhydrophobicity: Defining the minimum amount of TiO₂ nanoparticle coating

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

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

Reversible photodoping of TiO₂ nanoparticles

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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

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

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

Optical properties of GaAs_{1-x}Bi_x/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. & Guina, M., 13 Nov 2018, In : *Semiconductor Science and Technology*. 33, 12, 124015.

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Tunable Reflection Type Plasmon Induced Transparency with Graphene

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

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

Demonstration of optical nonlinearity in InGaAsP/InP passive waveguides

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

Processing and Characterization of Bioactive Borosilicate Glasses and Scaffolds with Persistent Luminescence

Del Cerro, P. R., Saarinen, M., Massera, J., Norrbo, I., Lastusaari, M. & Petit, L., 26 Sep 2018, *2018 20th International Conference on Transparent Optical Networks, ICTON 2018*. IEEE COMPUTER SOCIETY PRESS, Vol. 2018-July. 5 p. 8473916. (Conference proceedings : International Conference on Transparent Optical Networks).

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Dilute nitride triple junction solar cells for space applications: Progress towards highest AMO efficiency

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Fluorescence bandwidth of 280nm from broadband Ce³⁺-doped silica fiber pumped with blue laser diode

Yadav, A., Chichkov, N. B., Gumenyuk, 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

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

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

Processing of printed silver patterns on an ETFE substrate

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

Exciton localization and structural disorder of GaAs_{1-x}Bi_x/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

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

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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

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

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

Fabrication and reliability evaluation of passive UHF RFID T-shirts

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

Progress on HL-LHC Nb₃Sn Magnets

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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.

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The effect of carbon and nickel additions on the precursor synthesis of Cr₃C₂-Ni nanopowder

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

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

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

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

Murtomäki, 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

The effects of laser patterning 10CeTZP-Al₂O₃ 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

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

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., Senthamaraikanan, 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

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., Cokduygulular, 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

Quantum-well Laser Emitting at 1.2 μm-1.3 μm 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.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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., Róg, 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

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

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

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

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

Multiwavelength surface contouring from phase-coded diffraction patterns

Katkovnik, V., Shevkunov, I., Petrov, N. V. & Eguiazarian, K., 1 Jan 2018, *Unconventional Optical Imaging 2018. Strasbourg, France*. SPIE, Vol. 10677. 106771B. (Proceedings of SPIE - The International Society for Optical Engineering; vol. 10677).

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., Härkönen, 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

Ultra-large mode area single frequency anisotropic MOPA with double clad Yb-doped tapered fiber

Noronen, T., Fedotov, A., Rissanen, J., Gumenyuk, R., Butov, O., Chamorovskii, Y., Golant, K., Odnoblyudov, M. & Filippov, V., 1 Jan 2018, *Fiber Lasers XV: Technology and Systems*. SPIE, IEEE, 6 p. 105121T. (Proceedings of SPIE; vol. 10512).

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

10 kA Joints for HTS Roebel Cables

Murtomaeki, 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. & Wolf, F., 2018, In : IEEE Transactions on Applied Superconductivity. 28, 3

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

Action recognition using the 3D dense microblock difference

Voronin, V., Pismenskova, M., Zelensky, A., Cen, Y., Nadykto, A. & Eguiazarian, K., 2018, *Counterterrorism, Crime Fighting, Forensics, and Surveillance Technologies II*. SPIE, 108020O. (Proceedings of SPIE; vol. 10802).

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

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

Better understanding of the role of SiO₂, P₂O₅ and Al₂O₃ on the spectroscopic properties of Yb³⁺ 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

Design of a Nb₃Sn 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

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

Directional random laser by combining cavity-less lasing and spatial solitons in liquid crystals

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

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

Durandin, N. A., Isokuoritti, 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

Electro-optic steering of random laser emission in liquid crystals

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

Essential Measurements for Finite Element Simulations of Magnetostrictive Materials

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

Frequency-doubled VECSEL employing a Volume Bragg Grating for linewidth narrowing

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

Highly-efficient Ho:KY(WO₄)₂ thin-disk lasers at 2.06 μm

Mateos, X., Loiko, P., Lamrini, S., Scholle, K., Fuhrberg, P., Suomalainen, S., Härkönen, A., Guina, M., Vatnik, S., Vedin, I., Aguiló, M., Díaz, 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).

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

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

Integrated multi-wavelength mid-IR light source for gas sensing

Karioja, P., Alajoki, T., Cherchi, M., Ollila, J., Harjanne, M., Heinilehto, N., Suomalainen, S., Zia, N., Tuorila, H., Viheriälä, J., Guina, M., Buczynski, R., Kasztelanic, R., Salo, T., Virtanen, S., Kluczynski, P., Borgen, L., Ratajczyk, M. & Kalinowski, P., 2018, *Next-Generation Spectroscopic Technologies XI*. SPIE, IEEE, 106570A. (SPIE Conference Proceedings; vol. 10657).

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

Light propagation analysis in nervous tissue for wireless optogenetic nanonetworks

Wirdatmadja, S., Johari, P., Balasubramaniam, S., Bae, Y., Stachowiak, M. K. & Jornet, J. M., 2018, *Optogenetics and Optical Manipulation 2018*. SPIE, 104820R

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

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

Narrow-linewidth 780 nm DFB lasers fabricated using nanoimprint lithography

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

Narrow-linewidth operation of folded VECSEL cavity with twist-mode configuration

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

Open Material Property Library With Native Simulation Tool Integrations - MASTO

Stenvall, A. & Lahtinen, V., 2018, In : *IEEE Transactions on Applied Superconductivity*.
Research output: Contribution to journal › Article › Scientific › peer-review

Programming Photoresponse in Liquid Crystal Polymer Actuators with Laser Projector

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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

Real-time measurements of nonlinear instabilities in optical fibers

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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

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

Alekseev, A., Ihalainen, P., Ivanov, A., Domnin, I., Rosqvist, E., Lemmetyinen, H., Vuorimaa-Laukkanen, E., Peltonen, J. & Vyaz'min, S., 2018, In : *Thin Solid Films*. 645, p. 108-118
11 p.
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Sub-100 ps monolithic diamond Raman laser emitting at 573 nm

Nikkinen, J., Savitski, V., Reilly, S., Dziechciarzyk, L., Härkönen, 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-parts-per-trillion sensitivity in trace gas detection by cantilever-enhanced photo-acoustic spectroscopy

Tomberg, T., Vainio, M., Hieta, T. & Halonen, L., 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

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.

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Professional

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

Generation of Sub-100 ps Pulses at 532, 355, and 266 nm Using a SESAM Q-Switched Microchip Laser

Nikkinen, J., Härkönen, 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

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. & Kalarikkal, N., 1 Nov 2017, In : *Optical Materials*. 73, p. 695-705 11 p.

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

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

Välimäki, H., Verho, J., Kreutzer, J., Kattiparambil Rajan, D., Rynnänen, 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

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

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

Novel Er³⁺ doped phosphate glass-ceramics for photonics

Petit, L., Nguyen, H., Hongisto, M., Salminen, T., Hakkarainen, T., Lopez-Iscoa, P., Pugliese, D., Boetti, N. G. & Milanese, D., 1 Sep 2017, *ICTON 2017 - 19th International Conference on Transparent Optical Networks*. IEEE COMPUTER SOCIETY PRESS

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

Development of dust test method for motor drives

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

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

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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

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

Finite element method incorporating coupled magneto-elastic model for magneto-mechanical energy harvester

Ahmed, U., Harju, J., Poutala, J., Ruuskanen, P., Rasilo, P. & Kouhia, R., 19 Jun 2017. 2 p.

Research output: Other conference contribution > Paper, poster or abstract > Scientific

Capability assessment of inkjet printing for reliable RFID applications

Putaaala, 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

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

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

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

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

Quench Protection Study of the Eurocircol 16 T $\cos\theta$ Dipole for the Future Circular Collider (FCC)

Marinozzi, V., Bellomo, G., Caiffi, B., Fabbriatore, 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

Suitability of Different Quench Protection Methods for a 16 T Block-Type Nb_3Sn Accelerator Dipole Magnet

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

The 16 T Dipole Development Program for FCC

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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.

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

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

Fabrication and performance evaluation of 3D-printed graphene passive UHF RFID tags on cardboard

He, H., Akbari, M., Chen, X., Nommeots-Nomm, A., Chen, L., Ukkonen, L. & Virkki, J., 22 May 2017, *2017 Progress in Electromagnetics Research Symposium - Spring, PIERS 2017*. IEEE, p. 3322-3325 4 p.

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

Two-part stretchable passive UHF RFID textile tags

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › 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

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.

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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

Effect of the addition of Al₂O₃, TiO₂ and ZnO on the thermal, structural and luminescence properties of Er³⁺-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.

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

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

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

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Research output: Other conference contribution > Paper, poster or abstract > Scientific

Anisotropic ultra-large mode area Yb-doped tapered double clad fiber for ultrafast amplifiers

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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

Dots-on-the-fly electron beam lithography

Isotalo, T. J. & Niemi, T., 2016, *SPIE Proceedings: Alternative Lithographic Technologies VIII*. Bencher, C. (ed.). SPIE, Vol. 9777. 7 p. 97771E. (Proceedings of SPIE).

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

Fabrication and characterization of broadband superluminescent diodes for 2 μm wavelength

Zia, N., Viheriälä, J., Koskinen, R., Koskinen, M., Suomalainen, S. & Guina, M., 2016, *Light-Emitting Diodes: Materials, Devices, and Applications for Solid State Lighting XX*. SPIE, 97680Q. (Proceedings of SPIE; vol. 9768).

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

Pajukoski, H., Näkki, 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-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).

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

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Moirangthem, M., Stumpel, J. E., Alp, B., Teunissen, P., Bastiaansen, C. W. M. & Schenning, A. P. H. J., 2016, *Emerging Liquid Crystal Technologies XI*. SPIE, Vol. 9769. 97690Y

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

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

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

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

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

Integrating III-V, Si, and polymer waveguides for optical interconnects: RAPIDO

Aalto, T., Harjanne, M., Offrein, B. J., Caër, C., Neumeier, C., Malacarne, A., Guina, M., Sheehan, R. N., Peters, F. H. & Melanen, P., 2016, *Optical Interconnects XVI*. SPIE, 97530D. (Proceedings of SPIE; vol. 9753).

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

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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

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Research output: Contribution to journal > Editorial > Scientific

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Fotiadi, A. A., Korobko, D. A., Okhotnikov, O. G. & Zolotovskii, I. O., 2016, *Nonlinear Optics and its Applications IV*. SPIE, Vol. 9894. 989411. (Proceedings of SPIE; vol. 9894).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

Simultaneous binary hash and features learning for image retrieval

Frantc, V. A., Makov, S. V., Voronin, V. V., Marchuk, V. I., Semenishchev, E. A., Egiazarian, K. O. & Agaian, S., 2016, *Mobile Multimedia/Image Processing, Security, and Applications 2016*. SPIE, 986902. (SPIE Conference Proceedings; vol. 9869).

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

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

Evaluating transparent liquid screen overlay as a haptic conductor: Method of enhancing touchscreen based user interaction by a transparent deformable liquid screen overlay

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Su, W., Cooper, J. R., Cook, B. S., Tentzeris, M. M., Mariotti, C. & Roselli, L., 31 Dec 2015, *2015 IEEE SENSORS - Proceedings*. Institute of Electrical and Electronics Engineers Inc., 7370300

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

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A novel 3-D printed loop antenna using flexible NinjaFlex material for wearable and IoT applications

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

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

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

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

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Analysis of uncertainties in protection heater delay time measurements and simulations in Nb₃Sn high-field accelerator magnets

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A novel strain sensor based on 3D printing technology and 3D antenna design

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

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

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

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

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Study of quench protection for the Nb₃Sn low-β quadrupole for the LHC luminosity upgrade (HiLumi-LHC)

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

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

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An integrated "sense-and-communicate" broad-/narrow-band optically controlled reconfigurable antenna for cognitive radio systems

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

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

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

Green (In,Ga,Al)P-GaP light-emitting diodes grown on high-index GaAs surfaces

Ledentsov, N. N., Shchukin, V. A., Lyytikäinen, 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 Diodes: Materials, Devices, and Applications for Solid State Lighting XIX*. SPIE, Vol. 9383. 93830E

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

>8W GaInNAs VECSEL emitting at 615 nm

Leinonen, T., Penttinen, J. P., Korpijärvi, 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

Interstitial photodynamic therapy and glioblastoma: Light fractionation study on a preclinical model: Preliminary results
Leroy, H. A., Vermandel, M., Tétard, M. C., Lejeune, J. P., Mordon, S. & Reyns, N., 2015, *Optical Techniques in Neurosurgery, Neurophotonics, and Optogenetics II*. SPIE, Vol. 9305. 93050D

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

Machine learning for adaptive bilateral filtering

Frosio, I., Egiazarian, K. & Pulli, K., 2015, *Image Processing: Algorithms and Systems XIII*. SPIE, Vol. 9399. 939908. (Proceedings of SPIE - The International Society for Optical Engineering).

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

Measuring bend losses in large-mode-area fibers

Ye, C., Koponen, J., Aallos, V., Kokki, T., Petit, L. & Kimmelma, O., 2015, *Fiber Lasers XII: Technology, Systems, and Applications*. SPIE, Vol. 9344. 934425

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

Monolithic GaInNAsSb/GaAs VECSEL emitting at 1550 nm

Korpijärvi, V-M., Kantola, E. L., Leinonen, T. & Guina, M., 2015, *SPIE conference proceedings*. SPIE, Vol. 9349. 93490D

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › 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

No-reference visual quality assessment for image inpainting

Voronin, V. V., Frantc, V. A., Marchuk, V. I., Sherstobitov, A. I. & Egiazarian, K., 2015, *Image Processing: Algorithms and Systems XIII*. SPIE, 93990U. (SPIE Conference Proceedings; vol. 9399).

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

Power and wavelength scaling using semiconductor disk laser - bismuth fiber MOPA systems

Heikkinen, J., Gumenyuk, R., Rantamäki, A., Lyytikäinen, J., Leinonen, T., Zolotovskii, I., Melkumov, M., Dianov, E. M. & Okhotnikov, O. G., 2015, *Vertical External Cavity Surface Emitting Lasers (VECSELs) V*. Guina, M. (ed.). BELLINGHAM: SPIE, 7 p. 93490E. (Proceedings of SPIE; vol. 9349).

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

Preserving natural scene lighting by strobe-lit video

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

Real-time depth image-based rendering with layered dis-occlusion compensation and aliasing-free composition

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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

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

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

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

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

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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 NRSM 2014*. Institute of Electrical and Electronics Engineers Inc., 6928137

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Enhanced-performance wireless conformal "smart skins" utilizing inkjet-printed carbon-nanostructures

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Novel highly-efficient and misalignment insensitive wireless power transfer systems utilizing Strongly Coupled Magnetic Resonance principles

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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., Korpjärvi, 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.

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

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

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Influence of the P2O5/Al2O3 co-doping on the local environment of erbium ions and on the 1.5 μm quantum efficiency of Er3+-borosilicate glasses

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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

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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.

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A hand-held immaterial volumetric display

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

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

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Compressive strain measurement using RFID patch antenna sensors

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Pulsed high-power yellow-orange VECSEL

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

Symmetry-broken electronic structure and uniaxial Fermi surface nesting of untwinned CaFe₂As₂

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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

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

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

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

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A near-infrared optoelectronic approach to detection of road conditions

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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

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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

Cold test results of the LARP HQ Nb₃Sn quadrupole magnet at 1.9 K

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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

Germanium-on-glass solar cells: Fabrication and characterization

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

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

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

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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

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

Properties of nematicons in low-birefringence nematic liquid crystals

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Strong localization in unintentional disordered photonics crystal waveguides

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

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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

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Refraction of nonlinear light beams in nematic liquid crystals

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

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

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Halogen bonding versus hydrogen bonding in driving self-assembly and performance of light-responsive supramolecular polymers

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

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

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Inkjet-printed graphene-based wireless gas sensor modules

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Parametric conversion in micrometer and submicrometer structured ferroelectric crystals by surface poling

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

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Third order nonlinear optical response of TTF-based molecular corners

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Towards universal enrichment nanocoating for IR-ATR waveguides

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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. & Tentzeris, E. M., Aug 2011, In : IEICE TRANSACTIONS ON ELECTRONICS. E94-C, 8, p. 1328-1331 4 p.

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

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

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An ab initio study of $\text{PuO}_{2+0.25}$, $\text{UO}_{2+0.25}$, and $\text{U}_{0.5}\text{Pu}_{0.5}\text{O}_{2+0.25}$

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