

**Redox-active, organometallic surface-relief gratings from azobenzene-containing polyferrocenylsilane block copolymers. /**

Ahmed, Rumman; Priimagi, Arri; Faul, Charl F J; Manners, Ian.

In: *Advanced Materials*, Vol. 24, No. 7, 14.02.2012, p. 926-931.

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

**Enablers and barriers of smart data-based asset management services in industrial business networks. /**

Ahonen, Toni; Hanski, Jyri; Hyvärinen, Matti; Kortelainen, Helena; Uusitalo, Teuvo; Vainio, Henri; Kunttu, Susanna; Koskinen, Kari.

Lecture Notes in Mechanical Engineering. Pleiades Publishing, 2019. p. 51-60 (Lecture Notes in Mechanical Engineering).

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

**Remote diagnostics application software for remote handling equipment. /**

Alanen, Jarmo; Ruiz Morales, Emilio; Muhammad, Ali; Saarinen, Hannu; Minkkinen, Joni.

In: *Fusion Engineering and Design*, 2019.

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

**Modeling of steels and steel surfaces using quantum mechanical first principles methods. /**

Alatalo, Matti; Pitkänen, Heikki; Ropo, Matti; Kokko, Kalevi; Vitos, Levente.

Physical and Numerical Simulation of Materials Processing VII. Vol. 762 2013. p. 445-450 (*Materials Science Forum*; Vol. 762).

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

**Static friction measurements on steel against uncoated and coated cast iron. /**

Andersson, P.; Kilpi, L.; Holmberg, K.; Vaajoki, A.; Oksanen, V.

In: *Tribologia*, Vol. 34, No. 1-2, 01.01.2016, p. 5-40.

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

**Democratizing composites manufacturing -inexpensive tooling empowers new players. /**

Antin, Kim Niklas; Pärnänen, Tuomas.

In: *SAMPE Journal*, Vol. 53, No. 4, 01.07.2017, p. 6-10.

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

**Nonlinear model predictive energy management of hydrostatic drive transmissions. /**

Backas, Joni; Ghabcheloo, Reza.

In: *Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering*, Vol. 233, No. 3, 01.03.2019, p. 335-347.

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

**Moving Web and Dynamic Problem of Aerothermoelastic Vibrations and Instability. /**

Banichuk, Nikolay; Ivanova, Svetlana; Jeronen, Juha.

*Advanced Problems in Mechanics: Proceedings of the 47th International Summer School-Conference on Advanced Problems in Mechanics, APM 2019.* ed. / D.A. Indeitsev; A.M. Krivtsov. Springer, 2020. p. 66-71 (Lecture Notes in Mechanical Engineering).

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

**Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> Nano-heterostructure Photoanodes for Highly Efficient Solar Water Oxidation. /**

Barreca, Davide; Carraro, Giorgio; Gasparotto, Alberto; Maccato, Chiara; Warwick, Michael E A; Kaunisto, Kimmo; Sada, Cinzia; Turner, Stuart; Gönüllü, Yakup; Ruoko, Tero-Petri; Borgese, Laura; Bontempi, Elza; Van Tendeloo, Gustaaf; Lemmetyinen, Helge; Mathur, Sanjay.

In: *Advanced Materials Interfaces*, Vol. 2, No. 17, 2015.

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

**Vapor Phase Fabrication of Nanoheterostructures Based on ZnO for Photoelectrochemical Water Splitting. /**

Barreca, Davide; Carraro, Giorgio; Gasparotto, Alberto; Maccato, Chiara; Altantzis, Thomas; Sada, Cinzia; Kaunisto, Kimmo; Ruoko, Tero-Petri; Bals, Sara.

In: *Advanced Materials Interfaces*, Vol. 4, No. 18, 1700161, 2017.

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

**Second-harmonic generation imaging of semiconductor nanowires with focused vector beams.** / Bautista, Godofredo; Mäkitalo, Jouni; Chen, Ya; Dhaka, Veer; Grasso, Marco; Karvonen, Lasse; Jiang, Hua; Huttunen, Mikko J.; Huhtio, Teppo; Lipsanen, Harri; Kauranen, Martti.

In: Nano Letters, Vol. 15, No. 3, 06.02.2015, p. 1564-1569.

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

**Circular dichroism in the second harmonic field evidenced by asymmetric Au coated GaAs nanowires.** / Belardini, Alessandro; Leahu, Grigore; Petronijevic, Emilija; Hakkarainen, Teemu; Koivusalo, Eero; Piton, Marcelo Rizzo; Talmila, Soile; Guina, Mircea; Sibilia, Concita.

In: Micromachines, Vol. 11, No. 2, 01.02.2020, p. 1-8.

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

**The correlation between gear contact friction and ball on disc friction measurements.** / Björling, M.; Miettinen, J.; Marklund, P.; Lehtovaara, A.; Larsson, R.

In: Tribology International, Vol. 83, 2015, p. 114-119.

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

**Waves in hyperbolic and double negative metamaterials including roques and solitons.** / Boardman, A. D.; Alberucci, A.; Assanto, G.; Grimalsky, V. V.; Kibler, B.; McNiff, J.; Nefedov, I. S.; Rapoport, Yu G.; Valagiannopoulos, C. A.

In: Nanotechnology, Vol. 28, No. 44, 444001, 09.10.2017.

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

**Wear and impact behaviour of High Velocity Air-Fuel sprayed Fe-Cr-Ni-B-C alloy coatings.** / Bolelli, Giovanni; Milanti, Andrea; Lusvardi, Luca; Trombi, Lorenzo; Koivuluoto, Heli; Vuoristo, Petri.

In: Tribology International, Vol. 95, 2016, p. 372-390.

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

**Graphoepitaxial Directed Self-Assembly of Polystyrene-Block-Polydimethylsiloxane Block Copolymer on Substrates Functionalized with Hexamethyldisilazane to Fabricate Nanoscale Silicon Patterns.** / Borah, Dipu; Rasappa, Sozaraj;

Sentharamaikannan, Ramsankar; Holmes, Justin D.; Morris, Michael A.

In: Advanced Materials Interfaces, Vol. 1, No. 3, 1300102, 01.06.2014.

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

**Block copolymer self-assembly on ethylene glycol (EG) self-assembled monolayer (SAM) for nanofabrication.** / Borah, Dipu; Rasappa, Sozaraj; Kosmala, Barbara; Holmes, Justin D.; Morris, Michael A.

Nanoscale Materials Modification by Photon, Ion, and Electron Beams. Vol. 1450 2012. p. 8-13.

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

**Erbium-doped borosilicate glasses containing various amounts of P2O5 and Al2O3 : Influence of the silica content on the structure and thermal, physical, optical and luminescence properties.** / Bourhis, Kevin; Massera, Jonathan; Petit, Laetitia; Koponen, Jouni; Fargues, Alexandre; Cardinal, Thierry; Hupa, Leena; Hupa, Mikko; Dussauze, Marc; Rodriguez, Vincent; Ferraris, Monica.

In: Materials Research Bulletin, Vol. 70, 01.10.2015, p. 47-54.

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

**Design and Control of a Flexible Joint as a Hydraulic Series Elastic Actuator for Manipulation Applications.** / Cao, Xuepeng; Aref, Mohammad M.; Mattila, Jouni.

Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems and Robotics, Automation and Mechatronics, CIS and RAM 2019. IEEE, 2019. p. 553-558 9095773 (IEEE International Conference on Cybernetics and Intelligent Systems).

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

**A system for real-time detection and tracking of vehicles from a single car-mounted camera.** / Caraffi, Claudio; Vojir, Tomáš; Trefný, Jiří; Šochman, Jan; Matas, Jiří.

2012 15th International IEEE Conference on Intelligent Transportation Systems, ITSC 2012. 2012. p. 975-982 6338748.

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

**Diverter remote handling for DEMO : Concept design and preliminary FMECA studies.** / Carfora, D.; Di Gironimo, G.; Järvenpää, J.; Huhtala, K.; Määttä, T.; Siuko, M.  
In: Fusion Engineering and Design, Vol. 98-99, 09.07.2015, p. 1437-1441.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Multicriteria selection in concept design of a diverter remote maintenance port in the EU DEMO reactor using an AHP participative approach.** / Carfora, D.; Gironimo, G. Di; Esposito, G.; Huhtala, K.; Määttä, T.; Mäkinen, H.; Miccichè, G.; Mozzillo, R.  
In: Fusion Engineering and Design, Vol. 112, 15.11.2016, p. 324-331.  
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, Bo; Routa, Iiris; Sariola, Veikko; Zhou, Quan.  
In: Journal of Micromechanics and Microengineering, Vol. 21, No. 9, 095024, 09.2011.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Self-alignment in the stacking of microchips with mist-induced water droplets.** / Chang, Bo; Sariola, Veikko; Jääskeläinen, Mirva; Zhou, Quan.  
In: Journal of Micromechanics and Microengineering, Vol. 21, No. 1, 015016, 01.2011.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Kirigami-Based Light-Induced Shape-Morphing and Locomotion.** / Cheng, Yu Chieh; Lu, Hao Chuan; Lee, Xuan; Zeng, Hao; Priimagi, Arri.  
In: Advanced Materials, 2019.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Semantic analysis of function-solution duality.** / Christophe, François; Ritola, Tuomas; Coatanéa, Eric; Bernard, Alain.  
ASME 2011 International Mechanical Engineering Congress and Exposition, IMECE 2011. Vol. 3 2011. p. 611-619.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Syndecan-4 tunes cell mechanics by activating the kindlin-integrin-RhoA pathway.** / Chronopoulos, Antonios; Thorpe, Stephen D.; Cortes, Ernesto; Lachowski, Dariusz; Rice, Alistair J.; Mykuliak, Vasyli V.; Rog, Tomasz; Lee, David A.; Hytönen, Vesa P.; del Río Hernández, Armando E.  
In: Nature Materials, 2020.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Evaluating retrofit options in a historical city center : Relevance of bio-based insulation and the need to consider complex urban form in decision-making.** / Claude, Sophie; Ginestet, Stéphane; Bonhomme, Marion; Escadeillas, Gilles; Taylor, Jonathon; Marincioni, Valentina; Korolija, Ivan; Altamirano, Hector.  
In: Energy and Buildings, Vol. 182, 01.01.2019, p. 196-204.  
Research output: Contribution to journal > Article > Scientific > peer-review

**A framework for building behavioral models for design-stage failure identification using dimensional analysis.** / Coatanéa, Eric; Ritola, Tuomas; Tumer, Irem Y.; Jensen, David.  
Proceedings of the ASME Design Engineering Technical Conference. Vol. 5 AMER SOC MECHANICAL ENGINEERS, 2010. p. 591-601.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Measurement theory and dimensional analysis : Methodological impact on the comparison and evaluation process.** / Coatanéa, Eric; Yannou, Bernard; Honkala, Sauli; Lajunen, Antti; Saarelainen, Tanja; Makkonen, Petri.  
19th International Conference on Design Theory and Methodology and 1st International Conference on Micro and Nano Systems, presented at - 2007 ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, IDETC/CIE2007. AMER SOC MECHANICAL ENGINEERS, 2008. p. 173-182.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Graph based representation and analyses for conceptual stages.** / Coatanéa, Eric; Nonsiri, Sarayut; Christophe, Francois; Mokammel, Faisal.

34th Computers and Information in Engineering Conference. Vol. 1A The American Society of Mechanical Engineers ASME, 2014.

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

**Knowledge-based artificial neural network (KB-ANN) in engineering : Associating functional architecture modeling, dimensional analysis and causal graphs to produce optimized topologies for KB-ANNs.** / Coatanéa, Eric; Wu, Di; Tsarkov, Vadim; Gary Wang, G.; Modi, Siddhant; Jafarian, Hesam.

38th Computers and Information in Engineering Conference. Vol. 1B-2018 The American Society of Mechanical Engineers ASME, 2018.

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

**New design of textile light diffusers for photodynamic therapy.** / Cochrane, Cédric; Mordon, Serge R.; Lesage, Jean Claude; Koncar, Vladan.

In: Materials Science and Engineering C: Materials for Biological Applications, Vol. 33, No. 3, 01.04.2013, p. 1170-1175.

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

**A near-infrared optoelectronic approach to detection of road conditions.** / Colace, L.; Santoni, F.; Assanto, G.

In: Optics and Lasers in Engineering, Vol. 51, No. 5, 05.2013, p. 633-636.

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

**Second-Harmonic Generation from Metal Nanoparticles : Resonance Enhancement versus Particle Geometry.** / Czaplicki, R.; Mäkitalo, J.; Siikanen, R.; Husu, H.; Lehtolahti, J.; Kuittinen, M.; Kauranen, M.

In: Nano Letters, Vol. 15, No. 1, 14.01.2015, p. 530-534.

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

**Less Is More : Enhancement of Second-Harmonic Generation from Metasurfaces by Reduced Nanoparticle Density.** /

Czaplicki, Robert; Kiviniemi, Antti; Huttunen, Mikko J.; Zang, Xiaorun; Stolt, Timo; Vartiainen, Ismo; Butet, Jérémy; Kuittinen, Markku; Martin, Olivier J.F.; Kauranen, Martti.

In: Nano Letters, Vol. 18, No. 12, 12.12.2018, p. 7709-7714.

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

**Naturally occurring amino acids : A suitable substitute of N-N-di-phenyl guanidine (DPG) in silica tyre formulation? /**

Debnath, Subhas Ch; Das, Amit; Basu, Debdipta; Heinrich, G.

In: KKG: KAUTSCHUK GUMMI KUNSTSTOFFE, Vol. 66, No. 1-2, 01.2013, p. 25-31.

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

**Deformability analysis and improvement in stretchable electronics systems through finite element analysis.** / Di Vito, Donato; Mosallaei, Milad; Vahed, Behnam Khorramdel; Kanerva, Mikko; Mäntysalo, Matti.

Proceedings of XXIV AIMETA Conference 2019. ed. / Antonio Carcaterra; Giorgio Graziani; Achille Paolone. Springer, 2020. p. 755-763 (Lecture Notes in Mechanical Engineering).

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

**Techno-economic evaluation of integrating torrefaction with anaerobic digestion.** / Doddapaneni, Tharaka Rama Krishna C.; Praveenkumar, Ramasamy; Tolvanen, Henrik; Rintala, Jukka; Konttinen, Jukka.

In: Applied Energy, Vol. 213, 2018, p. 272-284.

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

**Framework and feasibility study for pairwise comparison tool.** / Ellman, Asko; Wendrich, Robert; Tiainen, Tarja.

Proceedings of the ASME 2016 Computers and Information in Engineering Conference IDETC/CIE 2016. Charlotte, North Carolina : ASME, 2016. DETC2016-59886.

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

**Conductivity control via minimally invasive anti-Frenkel defects in a functional oxide.** / Evans, Donald M.; Holstad, Theodor S.; Mosberg, Aleksander B.; Småbråten, Didrik R.; Vullum, Per Erik; Dadlani, Anup L.; Shapovalov, Konstantin; Yan, Zewu; Bourret, Edith; Gao, David; Akola, Jaakko; Torgersen, Jan; van Helvoort, Antonius T.J.; Selbach, Sverre M.; Meier, Dennis.

In: Nature Materials, 2020.

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

**Chemically tailored dielectric-to-metal transition for the design of metamaterials from nanoimprinted colloidal nanocrystals.** / Fafarman, Aaron T.; Hong, Sung Hoon; Caglayan, Humeyra; Ye, Xingchen; Diroll, Benjamin T.; Paik, Taejong; Engheta, Nader; Murray, Christopher B.; Kagan, Cherie R.

In: Nano Letters, Vol. 13, No. 2, 13.02.2013, p. 350-357.

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

**Flux-Weakening Control for IPMSM Employing Model Order Reduction.** / Far, Mehrnaz Farzam; Mustafa, Bilal; Martin, Florian; Rasilo, Paavo; Belahcen, Anouar.

2018 23rd International Conference on Electrical Machines, ICEM 2018. IEEE, 2018. p. 1510-1516.

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

**Model Order Reduction of Bearingless Reluctance Motor Including Eccentricity.** / Far, Mehrnaz Farzam; Mukherjee, Victor; Martin, Florian; Rasilo, Paavo; Belahcen, Anouar.

2018 23rd International Conference on Electrical Machines, ICEM 2018. IEEE, 2018. p. 2243-2249.

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

**Improving the thermal performance of concrete-sandwich envelopes in relation to the moisture behaviour of building structures in boreal conditions.** / Fedorik, Filip; Malaska, Mikko; Hannila, Raimo; Haapala, Antti.

In: Energy and Buildings, Vol. 107, 15.11.2015, p. 226-233.

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

**Investigation on positioning control strategy and switching optimization of an equal coded digital valve system.** / Gao, Qiang; Linjama, Matti; Paloniitty, Miika; Zhu, Yuchuan.

In: Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering, 2019.

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

**Analysis of thermo-active pile structures and their performance under groundwater flow conditions.** / Gashti, E. Hassani Nezhad; Malaska, M.; Kujala, K.

In: Energy and Buildings, Vol. 105, 11.08.2015, p. 1-8.

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

**Complete Odometry Estimation of a Vehicle Using Single Automotive Radar and a Gyroscope.** / Ghabcheloo, Reza; Siddiqui, Shadman.

MED 2018 - 26th Mediterranean Conference on Control and Automation. IEEE, 2018. p. 855-860 8442474.

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

**Shape-dependent plasmonic response and directed self-assembly in a new semiconductor building block, indium-doped cadmium oxide (ICO).** / Gordon, Thomas R.; Paik, Taejong; Klein, Dahlia R.; Naik, Gururaj V.; Caglayan, Humeyra; Boltasseva, Alexandra; Murray, Christopher B.

In: Nano Letters, Vol. 13, No. 6, 12.06.2013, p. 2857-2863.

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

**Resilient Cooperative Voltage Control for Distribution Network with High Penetration Distributed Energy Resources.** / Gusrialdi, Azwirman; Xu, Ying; Qu, Zhihua; Simaan, Marwan A.

European Control Conference 2020, ECC 2020. IEEE, 2020. p. 1533-1539.

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

**Improved dimensional stability with bioactive glass fibre skeleton in poly(lactide-co-glycolide) porous scaffolds for tissue engineering.** / Haaparanta, Anne-Marie; Uppstu, Peter; Hannula, Markus; Ellä, Ville; Rosling, Ari; Kellomäki, Minna.

In: Materials Science and Engineering C: Materials for Biological Applications, Vol. 56, 5584, 20.07.2015, p. 457-466.

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

**Effect of finish rolling and quench stop temperatures on impact-abrasive wear resistance of 0.35 % carbon direct-quenched steel.** / Haiko, O.; Miettunen, I.; Porter, D.; Ojala, N.; Ratia, V.; Heino, V.; Kemppainen, A.

In: Tribologia, Vol. 35, No. 1-2, 2017, p. 5-21.

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

**Effect of microstructure on the abrasive wear resistance of steels with hardness 450 HV.** / Haiko, O.; Heino, V.; Porter, D. A.; Uusitalo, J.; Kömi, J.

In: Tribologia, Vol. 36, No. 1, 2019, p. 54-57.

Research output: Contribution to journal > Article > Scientific

**Lithography-free oxide patterns as templates for self-catalyzed growth of highly uniform GaAs nanowires on Si(111).** /

Hakkarainen, T. V.; Schramm, A.; Mäkelä, J.; Laukkanen, P.; Guina, M.

In: Nanotechnology, Vol. 26, No. 27, 275301, 18.07.2015.

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

**Development and numerical implementation of an anisotropic continuum damage model for concrete.** / Hartikainen, Juha; Kolari, Kari; Kouhia, Reijo.

Advances in Fracture and Damage Mechanics XV. Trans Tech Publications Ltd, 2016. p. 115-118 (Key Engineering Materials; Vol. 713).

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

**Simulating the Drag Coefficient of a Spherical Autonomous Underwater Vehicle.** / Heininen, Arttu; Aaltonen, Jussi; Koskinen, Kari T.

Proceedings of the 2nd Annual SMACC Research Seminar 2017. ed. / Jussi Aaltonen; Riikka Virkkunen; Kari T. Koskinen; Risto Kuivanen. Vol. 2 Tampere : Tampere University of Technology, 2017. p. 53-56 14.

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

**Effects of added glazing on Balcony indoor temperatures : Field measurements.** / Hilliaho, Kimmo; Köliö, Arto; Pakkala, Toni; Lahdensivu, Jukka; Vinha, Juha.

In: Energy and Buildings, Vol. 128, 2016, p. 458-472.

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

**Fretting-induced friction and wear in large flat-on-flat contact with quenched and tempered steel.** / Hintikka, Jouko; Lehtovaara, Arto; Mäntylä, Antti.

In: Tribology International, Vol. 92, 02.07.2015, p. 191-202.

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

**Normal displacements in non-Coulomb friction conditions during fretting.** / Hintikka, Jouko; Lehtovaara, Arto; Mäntylä, Antti.

In: Tribology International, Vol. 94, 2016, p. 633-639.

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

**Third Particle Ejection Effects on Wear with Quenched and Tempered Steel Fretting Contact.** / Hintikka, Jouko; Lehtovaara, Arto; Mäntylä, Antti.

In: TRIBOLOGY TRANSACTIONS, Vol. 60, No. 1, 2017, p. 70-78.

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

**Stable and unstable friction in fretting contacts.** / Hintikka, Jouko; Mäntylä, Antti; Vaara, Joonas; Frondelius, Tero; Lehtovaara, Arto.

In: Tribology International, Vol. 131, 01.03.2019, p. 73-82.

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

**Running-in in fretting, transition from near-stable friction regime to gross sliding.** / Hintikka, Jouko; Mäntylä, Antti; Vaara, Joonas; Frondelius, Tero; Juoksukangas, Janne; Lehtovaara, Arto.

In: Tribology International, Vol. 143, 106073, 11.2019.

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

**High Temperature Tension HSB Device Based on Direct Electrical Heating.** / Hokka, M.; Östman, K.; Rämö, J.; Kuokkala, V. T.

Dynamic Behavior of Materials, Volume 1: Proceedings of the 2014 Annual Conference on Experimental and Applied Mechanics. ed. / Bo Song; Daniel Casem; Jamie Kimberley. Vol. 65 Springer, 2015. p. 227-233 (Conference Proceedings of the Society for Experimental Mechanics Series).

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

**Effects of strain rate and confining pressure on the compressive behavior of Kuru granite.** / Hokka, M.; Black, J.; Tklich, D.; Fourmeau, M.; Kane, A.; Hoang, N. H.; Li, C. C.; Chen, W. W.; Kuokkala, V.-T.

In: International Journal of Impact Engineering, Vol. 91, 01.05.2016, p. 183-193.

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

**DIC measurements of the human heart during cardiopulmonary bypass surgery.** / Hokka, Mikko; Mirow, Nikolas; Nagel, Horst; Vogt, Sebastian; Kuokkala, Veli-Tapani.

Conference Proceedings of the Society for Experimental Mechanics Series. Vol. 6 Springer New York LLC, 2016. p. 51-59.

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

**Global energy consumption due to friction and wear in the mining industry.** / Holmberg, Kenneth; Kivikytö-Reponen, Päivi; Härkisaari, Pirita; Valtonen, Kati; Erdemir, Ali.

In: Tribology International, Vol. 115, 01.11.2017, p. 116-139.

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

**Käyräviivaiset koordinaatitot kontinuumimekaniikassa.** / Holopainen, Sami.

In: Rakenteiden Mekaniikka, Vol. 53, No. 2, 2020, p. 53-66.

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

**Dissolution, bioactivity and osteogenic properties of composites based on polymer and silicate or borosilicate bioactive glass.** / Houaoui, A.; Lyra, I.; Agniel, R.; Pauthe, E.; Massera, J.; Boissière, M.

In: Materials Science and Engineering C, Vol. 107, 110340, 2019.

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

**Digital hydraulic multi-pressure actuator – the concept, simulation study and first experimental results.** / Huova, Mikko; Aalto, Arttu; Linjama, Matti; Huhtala, Kalevi; Lantela, Tapio; Pietola, Matti.

In: International Journal of Fluid Power, Vol. 18, No. 3, 2017, p. 141-152.

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

**Behaviour of leaded tin bronze in simulated seawater in the absence and presence of tribological contact with alumina counterbody : Corrosion, wear and tribocorrosion.** / Huttunen-Saarivirta, E.; Isotahdon, E.; Metsäjoki, J.; Salminen, T.; Ronkainen, H.; Carpén, L.

In: Tribology International, Vol. 129, 2019, p. 257-271.

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

**Tribocorrosion behaviour of tin bronze CuSn12 under a sliding motion in NaCl containing environment : Contact to inert vs. reactive counterbody.** / Huttunen-Saarivirta, E.; Kilpi, L.; Pasanen, A. T.; Salminen, T.; Ronkainen, H.

In: Tribology International, Vol. 151, 106389, 01.11.2020.

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

**Differential basal-to-apical accessibility of lamin A/C epitopes in the nuclear lamina regulated by changes in cytoskeletal tension.** / Ihalainen, Teemu O.; Aires, Lina; Herzog, Florian A.; Schwartlander, Ruth; Moeller, Jens; Vogel, Viola.

In: Nature Materials, Vol. 14, No. 12, 01.12.2015, p. 1252-1261.

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

**Corrosion mechanisms of sintered Nd-Fe-B magnets in the presence of water as vapour, pressurised vapour and liquid.** / Isotahdon, E.; Huttunen-Saarivirta, E.; Heinonen, S.; Kuokkala, V. T.; Paju, M.

In: Journal of Alloys and Compounds, Vol. 626, 25.03.2015, p. 349-359.

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

**Characterization of the microstructure and corrosion performance of Ce-alloyed Nd-Fe-B magnets.** / Isotahdon, Elisa; Huttunen-Saarivirta, Eelina; Kuokkala, Veli.

In: *Journal of Alloys and Compounds*, Vol. 692, 01.2017, p. 190-197.

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

**Feed-hopper level estimation and control in cone crushers.** / Itävuori, Pekka; Hulthén, Erik; Vilkkonen, Matti.

In: *Minerals Engineering*, Vol. 110, 15.08.2017, p. 82-95.

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

**Mass balance control of crushing circuits.** / Itävuori, Pekka; Hulthén, Erik; Yahyaei, Moshen; Vilkkonen, Matti.

In: *Minerals Engineering*, Vol. 135, 05.2019, p. 37-47.

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

**Improving the toughness of thermally sprayed Cr<sub>3</sub>C<sub>2</sub>-NiCr hardmetal coatings by laser post-treatment.** / Janka, Leo; Norpoth, Jonas; Eicher, Stefan; Rodríguez Ripoll, Manel; Vuoristo, Petri.

In: *Materials and Design*, Vol. 98, 15.05.2016, p. 135-142.

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

**The effect of initial microstructure on the final properties of press hardened 22MnB5 steels.** / Järvinen, Henri; Isakov, Matti; Nyssönen, Tuomo; Järvenpää, Martti; Peura, Pasi.

In: *Materials Science and Engineering A: Structural Materials Properties Microstructure and Processing*, Vol. 676, 31.10.2016, p. 109-120.

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

**TOpti : a flexible framework for optimising energy management for various ship machinery topologies.** / Jaurola, Miikka; Hedin, Anders; Tikkanen, Seppo; Huhtala, Kalevi.

In: *Journal of Marine Science and Technology (Japan)*, 2018.

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

**A TOpti simulation for finding fuel saving by optimising propulsion control and power management.** / Jaurola, Miikka; Hedin, Anders; Tikkanen, Seppo; Huhtala, Kalevi.

In: *Journal of Marine Science and Technology (Japan)*, 2019.

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

**Computational design of a novel medium-carbon, low-alloy steel microalloyed with niobium.** / Javaheri, Vahid; Nyssönen, Tuomo; Grande, Bjørnar; Porter, David.

In: *Journal of Materials Engineering and Performance*, Vol. 27, No. 6, 06.2018, p. 2978-2992.

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

**ILC1 drive intestinal epithelial and matrix remodelling.** / Jowett, Geraldine M.; Norman, Michael D.A.; Yu, Tracy T.L.; Rosell Arévalo, Patricia; Hoogland, Dominique; Lust, Suzette T.; Read, Emily; Hamrud, Eva; Walters, Nick J.; Niazi, Umar; Chung, Matthew Wai Heng; Marciano, Daniele; Omer, Omer S.; Zabinski, Tomasz; Danovi, Davide; Lord, Graham M.; Hilborn, Jöns; Evans, Nicholas D.; Dreiss, Cécile A.; Bozec, Laurent; Oommen, Oommen P.; Lorenz, Christian D.; da Silva, Ricardo M.P.; Neves, Joana F.; Gentleman, Eileen.

In: *Nature Materials*, 2020.

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

**A comparison of relative displacement fields between numerical predictions and experimental results in fretting contact.** / Juoksukangas, J.; Lehtovaara, A.; Mäntylä, A.

In: *Proceedings of the institution of Mechanical Engineers Part J: Journal of Engineering Tribology*, Vol. 230, No. 10, 01.10.2016, p. 1273-1287.

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

**Experimental and numerical investigation of fretting fatigue behavior in bolted joints.** / Juoksukangas, Janne; Lehtovaara, Arto; Mäntylä, Antti.



In: Tribology International, Vol. 103, 01.11.2016, p. 440-448.

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

**Characterization of cracks formed in large flat-on-flat fretting contact.** / Juoksukangas, Janne; Nurmi, Verner; Hintikka, Jouko; Vippola, Minnamari; Lehtovaara, Arto; Mäntylä, Antti; Vaara, Joonas; Frondelius, Tero.

In: International Journal of Fatigue, Vol. 124, 07.2019, p. 361-370.

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

**Avoiding the high friction peak in fretting contact.** / Juoksukangas, Janne; Hintikka, Jouko; Lehtovaara, Arto; Mäntylä, Antti; Vaara, Joonas; Frondelius, Tero.

In: Rakenteiden Mekaniikka, Vol. 53, No. 1, 2020, p. 12-19.

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

**Chemical synthesis of WC-Co from water-soluble precursors : The effect of carbon and cobalt additions to WC synthesis.** / Kanerva, Ulla; Karhu, Marjaana; Lagerbom, Juha; Kronlöf, Anna; Honkanen, Mari; Turunen, Erja; Laitinen, Tarja.

In: International Journal of Refractory Metals and Hard Materials, Vol. 56, 01.04.2016, p. 69-75.

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

**Observation of Coexistence of Yu-Shiba-Rusinov States and Spin-Flip Excitations.** / Kezilebieke, Shawulienu; Žitko, Rok; Dvorak, Marc; Ojanen, Teemu; Liljeroth, Peter.

In: Nano Letters, Vol. 19, No. 7, 10.07.2019, p. 4614-4619.

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

**Redundant robotic manipulator path planning for real-time obstacle and self-collision avoidance.** / Kivelä, Tuomo; Mattila, Jouni; Puura, Jussi; Launis, Sirpa.

Advances in Service and Industrial Robotics: Proceedings of the 26th International Conference on Robotics in Alpe-Adria-Danube Region, RAAD 2017. ed. / Carlo Ferraresi; Giuseppe Quaglia. Springer International Publishing, 2017. p. 208-216 (Mechanisms and Machine Science; Vol. 49).

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

**Hot-box measurements to investigate the internal convection of highly insulated loose-fill insulation roof structures.** / Kivioja, Henna; Vinha, Juha.

In: Energy and Buildings, Vol. 216, 109934, 01.06.2020.

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

**Fabrication of soft devices with buried fluid channels by using sacrificial 3D printed molds.** / Koivikko, Anastasia; Sariola, Veikko.

2019 2nd IEEE International Conference on Soft Robotics (RoboSoft). IEEE, 2019. p. 509-513.

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

**Structures and properties of laser-assisted cold-sprayed aluminum coatings.** / Koivuluoto, Heli; Milanti, Andrea; Bolelli, Giovanni; Latokartano, Jyrki; Marra, Francesco; Pulci, Giovanni; Vihinen, Jorma; Lusvarghi, Luca; Vuoristo, Petri.

THERMEC 2016. Vol. 879 Trans Tech Publications Ltd, 2017. p. 984-989 (Materials Science Forum; Vol. 879).

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

**Adaptive and nonlinear control of discharge pressure for variable displacement axial piston pumps.** / Koivumäki, Janne; Mattila, Jouni.

In: Journal of Dynamic Systems, Measurement and Control: Transactions of the ASME, Vol. 139, No. 10, 101008, 01.10.2017.

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

**Hydrazone crosslinked hyaluronan-based hydrogels for therapeutic delivery of adipose stem cells to treat corneal defects.** / Koivusalo, Laura; Karvinen, Jennika; Sorsa, Eetu; Jönkkäri, Ilari; Väliäho, Jari; Kallio, Pasi; Ilmarinen, Tanja; Miettinen, Susanna; Skottman, Heli; Kellomäki, Minna.

In: Materials Science and Engineering C, Vol. 85, 04.2018, p. 68-78.

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

**Influence of specimen type and reinforcement on measured tension-tension fatigue life of unidirectional GFRP laminates.** / Korhikoski, Samuli; Brøndsted, Povl; Sarlin, Essi; Saarela, Olli.  
In: International Journal of Fatigue, Vol. 85, 01.04.2016, p. 114-129.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Implementation of a direct procedure for critical point computations using preconditioned iterative solvers.** / Kouhia, Reijo; Tůma, Miroslav; Mäkinen, Jari; Fedoroff, Alexis; Marjamäki, Heikki.  
In: Computers & Structures, Vol. 108-109, 10.2012, p. 110-117.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Optical interference lithography using azobenzene-functionalized polymers for micro-and nanopatterning of silicon.** / Kravchenko, Aleksandr; Shevchenko, Andriy; Ovchinnikov, Victor; Priimagi, Arri; Kaivola, Matti.  
In: Advanced Materials, Vol. 23, No. 36, 22.09.2011, p. 4174-4177.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Pneumatically actuated elastomeric device for simultaneous mechanobiological studies & live-cell fluorescent microscopy.** / Kreutzer, Joose; Viehrig, Marlitt; Maki, Antti-Juhana; Kallio, Pasi; Rahikainen, Rolle; Hytönen, Vesa.  
International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017 - Proceedings. IEEE, 2017.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Pneumatic unidirectional cell stretching device for mechanobiological studies of cardiomyocytes.** / Kreutzer, Joose; Viehrig, Marlitt; Pölonen, Risto Pekka; Zhao, Feihu; Ojala, Marisa; Aalto-Setälä, Katriina; Kallio, Pasi.  
In: BIOMECHANICS AND MODELING IN MECHANOBIOLOGY, 23.08.2019.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Analysis of common rail pressure signal of dual-fuel large industrial engine for identification of injection duration of pilot diesel injectors.** / Krogerus, Tomi; Hyvönen, Mika; Huhtala, Kalevi.  
In: Fuel, Vol. 216, 03.2018, p. 1-9.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Cost optimal and nearly zero (nZEB) energy performance calculations for residential buildings with REHVA definition for nZEB national implementation.** / Kurnitski, Jarek; Saari, Arto; Kalamees, Targo; Vuolle, Mika; Niemelä, Jouko; Tark, Teet.  
In: Energy and Buildings, Vol. 43, No. 11, 11.2011, p. 3279-3288.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Tampere University of Technology, laboratory of materials science, paper converting and packaging technology Tampere, Finland.** / Kuusipalo, Jurkka; Lahti, Johanna.  
16th TAPPI European PLACE Conference 2017: Basel; Switzerland; 22 May 2017 through 24 May 2017. Vol. May-2017 TAPPI Press, 2017.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Toward the Atomically Abrupt Interfaces of SiO<sub>x</sub>/Semiconductor Junctions.** / Kuzmin, Mikhail; Laukkanen, Pekka; Mäkelä, Jaakko; Yasir, Muhammad; Tuominen, Marjukka; Dahl, Johnny; Punkkinen, Marko P J; Kokko, Kalevi; Hedman, Hannu Pekka; Moon, Jongyun; Punkkinen, Risto; Lastusaari, Mika; Polojärvi, Ville; Korpjärvi, Ville-Markus; Guina, Mircea.  
In: Advanced Materials Interfaces, Vol. 3, No. 11, 1500510, 06.2016.  
Research output: Contribution to journal > Article > Scientific > peer-review

**A fractional representation approach to the robust regulation problem for SISO systems.** / Laakkonen, P.; Quadrat, A.  
In: Systems and Control Letters, Vol. 103, 01.05.2017, p. 32-37.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Improving the effect of nanoscale barrier coating on BOPP film properties : Influence of substrate contamination, web handling and pretreatments.** / Lahti, Johanna; Johansson, Petri; Lahtinen, Kimmo; Cameron, David C.; Seppänen, Tarja.  
TAPPI PLACE Conference 2014. Vol. 2 TAPPI Press, 2014. p. 1039-1061.

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

**Nanoscale barrier coating on BOPP packaging film by ALD.** / Lahti, Johanna.

TAPPI PLACE Conference 2016: Exploring New Frontiers. TAPPI Press, 2016. p. 493-505.

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

**The effects of corona and flame treatment : Part 2. PE-HD and PP coated papers.** / Lahti, Johanna; Tuominen, Mikko; Penttinen, Tapani; Räsänen, Jari P.; Kuusipalo, Jurkka.

TAPPI Press - 12th European PLACE Conference 2009. Vol. 1 2009. p. 278-314.

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

**Novel equipment to simulate hot air heat sealability of packaging materials.** / Lahti, Johanna; Kuusipalo, Jurkka; Auvinen, Sanna.

16th TAPPI European PLACE Conference 2017. TAPPI Press, 2017. p. 237-248.

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

**Novel bio-based materials for active and intelligent packaging.** / Lahti, Johanna; Kamppuri, Taina; Kuusipalo, Jurkka.

16th TAPPI European PLACE Conference 2017. TAPPI Press, 2017.

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

**Nanocellulose and Polylactic Acid Based Multilayer Coatings for Barrier Applications.** / Lahti, Johanna.

17th Biennial TAPPI European PLACE Conference 2019. TAPPI Press, 2019. p. 446-455.

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

**Market implementation of active and intelligent packaging-opportunities from a socio-economic perspective.** / Lahti, Johanna.

17th Biennial TAPPI European PLACE Conference 2019. TAPPI Press, 2019. p. 419-427.

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

**Statistical modeling of water vapor transmission rates for extrusion-coated papers.** / Lahtinen, Kimmo; Kuusipalo, Jurkka.

TAPPI 2008 PLACE Conference: Innovations in Flexible Consumer Packaging. 2008.

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

**Improving the effect of a nanoscale barrier coating on BOPP film properties by surface pretreatments.** / Lahtinen, Kimmo; Lahti, Johanna; Johansson, Petri; Seppänen, Tarja; Cameron, David C.

14th European PLACE Conference 2013. Vol. 1 TAPPI Press, 2013. p. 469-493.

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

**Concepts, methods and tools for individualized production.** / Lanz, M.; Tuokko, R.

In: PRODUCTION ENGINEERING, Vol. 11, No. 2, 01.04.2017, p. 205-212.

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

**Estimation of the largest expected photovoltaic power ramp rates.** / Lappalainen, Kari; Wang, Guang C.; Kleissl, Jan.

In: Applied Energy, Vol. 278, 115636, 15.11.2020.

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

**Multi-sensor next-best-view planning as matroid-constrained submodular maximization.** / Lauri, Mikko; Pajarinen, Joni; Peters, Jan; Frintrop, Simone.

In: IEEE Robotics and Automation Letters, Vol. 5, No. 4, 2020, p. 5323-5330.

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.; Khorrarnadel, B.; Dastpak, A.; Mäntysalo, M.

In: Journal of Micromechanics and Microengineering, Vol. 27, No. 9, 095005, 02.08.2017.

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

**Noncovalent functionalization of reduced graphene oxide with pluronic F127 and its nanocomposites with gum arabic.** / Layek, Rama K.; Uddin, Md Elias; Kim, Nam Hoon; Tak Lau, Alan Kin; Lee, Joong Hee.  
In: Composites Part B : Engineering, Vol. 128, 01.11.2017, p. 155-163.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Smart Skins : Could they be the ultimate sensing tool? Today's FFIDs industry and personal medical care both strongly demand accurate, reliable, robust, low.** / Le, Taoran; Lin, Ziyin; Wong, C. P.; Tenzler, M. M.  
In: IEEE Nanotechnology Magazine, Vol. 9, No. 2, 7080864, 01.06.2015, p. 4-10.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Detection of gaseous species during KCl-induced high-temperature corrosion by the means of CPFAAS and CI-API-TOF.** / Lehmusto, Juho; Olin, Miska; Viljanen, Jan; Kalliokoski, Joni; Mylläri, Fanni; Toivonen, Juha; Dal Maso, Miikka; Hupa, Leena.  
In: Materials and Corrosion, 30.08.2019.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Spodumene tailings for porcelain and structural materials : Effect of temperature (1050–1200°C) on the sintering and properties.** / Lemougna, Patrick N.; Yliniemi, Juho; Ismailov, Arnold; Levänen, Erkki; Tanskanen, Pekka; Kinnunen, Paivo; Roning, Juha; Illikainen, Mirja.  
In: Minerals Engineering, 2019.  
Research output: Contribution to journal › Article › Scientific › peer-review

**M-Estimator Application in Real-Time Sensor Fusion for Smooth Position Feedback of Heavy-Duty Field Robots.** / Liikanen, Henri; Aref, Mohammad M.; Mattila, Jouni.  
Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems (CIS) and IEEE Conference on Robotics, Automation and Mechatronics (RAM). IEEE, 2019. p. 368-373 (IEEE International Conference on Cybernetics and Intelligent Systems).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Controlling liquid spreading using microfabricated undercut edges.** / Liimatainen, Ville; Sariola, Veikko; Zhou, Quan.  
In: Advanced Materials, Vol. 25, No. 16, 24.04.2013, p. 2275-2278.  
Research output: Contribution to journal › Article › Scientific › peer-review

**The potential of electric trucks – An international commodity-level analysis.** / Liimatainen, Heikki; van Vliet, Oscar; Aplyn, David.  
In: Applied Energy, Vol. 236, 15.02.2019, p. 804-814.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Barkhausen noise response of three different welded duplex stainless steels.** / Lindgren, M.; Santa-aho, S.; Vippola, M.  
In: Insight, Vol. 58, No. 9, 01.09.2016, p. 480-486.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Experimental study on the behavior of wear resistant steels under high velocity single particle impacts.** / Lindroos, Matti; Apostol, Marian; Kuokkala, Veli Tapani; Laukkanen, Anssi; Valtonen, Kati; Holmberg, Kenneth; Oja, Olli.  
In: International Journal of Impact Engineering, Vol. 78, 2015, p. 114-127.  
Research output: Contribution to journal › Article › Scientific › peer-review

**The deformation, strain hardening, and wear behavior of chromium-alloyed hadfield steel in abrasive and impact conditions.** / Lindroos, Matti; Apostol, Marian; Heino, Vuokko; Valtonen, Kati; Laukkanen, Anssi; Holmberg, Kenneth; Kuokkala, Veli Tapani.  
In: Tribology Letters, Vol. 57, No. 3, 24, 2015.  
Research output: Contribution to journal › Article › Scientific › peer-review

**On the effect of deformation twinning and microstructure to strain hardening of high manganese austenitic steel 3D microstructure aggregates at large strains.** / Lindroos, Matti; Laukkanen, Anssi; Cailletaud, Georges; Kuokkala, Veli-Tapani.

In: International Journal of Solids and Structures, Vol. 125, 2017, p. 68-76.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Variable speed digital hydraulic transformer-based servo drive.** / Linjama, Matti.

In: Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering, 2019.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Variable speed drive with hydraulic boost.** / Linjama, Matti.

In: International Journal of Fluid Power, Vol. 20, No. 1, 2019, p. 99-123.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Running-in effects on friction of journal bearings under slow sliding speeds.** / Linjamaa, A.; Lehtovaara, A.; Kallio, M.; Léger, A.

In: Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2019.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Defined-size DNA triple crossover construct for molecular electronics : Modification, positioning and conductance properties.** / Linko, Veikko; Leppiniemi, Jenni; Paasonen, Seppo Tapio; Hytönen, Vesa P.; Jussi Toppari, J.

In: Nanotechnology, Vol. 22, No. 27, 275610, 08.07.2011.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Hexaferrite/polyethylene Composite coatings prepared with flame spraying.** / Lisjak, Darja; Lintunen, Pertti; Hujanen, Arto; Varis, Tommi; Bolelli, Giovanni; Lusvarghi, Luca; Jagodič, Marko; Drogenik, Miha.

In: Materials Letters, Vol. 65, No. 3, 15.02.2011, p. 534-536.  
Research output: Contribution to journal > Article > Scientific > peer-review

**The effect of phosphorous and arsenic on the fracture behaviour of a 2,25% Cr-1% Mo Steel.** / Lorimer, G. W.; Dicken, R.; Peura, P.; Pilkington, R.; Younes, C. M.; Allen, G. C.; Holt, M. J.

In: Materials Science Forum, Vol. 207-209, No. PART 2, 01.12.1996, p. 645-648.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells.** / Luna, E.; Wu, M.; Hanke, M.; Puustinen, J.; Guina, M.; Trampert, A.

In: Nanotechnology, Vol. 27, No. 32, 325603, 01.07.2016.  
Research output: Contribution to journal > Article > Scientific > peer-review

**FORMI: A Fast Holonomic Path Planning and Obstacle Representation Method Based on Interval Analysis.** / Mäenpää, Pekka; Aref, Mohammad M.; Mattila, Jouni.

Proceedings of the IEEE 2019 9th International Conference on Cybernetics and Intelligent Systems and Robotics, Automation and Mechatronics, CIS and RAM 2019. IEEE, 2019. p. 398-403 (IEEE International Conference on Cybernetics and Intelligent Systems).

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

**Electrolyte-gated organic field-effect transistor sensors based on supported biotinylated phospholipid bilayer.** / Magliulo, Maria; Mallardi, Antonia; Mulla, Mohammad Yusuf; Cotrone, Serafina; Pistillo, Bianca Rita; Favia, Pietro; Vikholm-Lundin, Inger; Palazzo, Gerardo; Torsi, Luisa.

In: Advanced Materials, Vol. 25, No. 14, 11.04.2013, p. 2090-2094.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Role-based visualization of industrial IoT-based systems.** / Mahmoodpour, Mehdi; Lobov, Andrei; Lanz, Minna; Mäkelä, Petteri; Rundas, Niko.

2018 14th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, MESA 2018. IEEE, 2018. 8449183.

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

**Roll-to-roll coating by liquid flame spray nanoparticle deposition.** / Mäkelä, Jyrki M.; Haapanen, Janne; Aromaa, Mikko; Teisala, Hannu; Tuominen, Mikko; Stepien, Milena; Saarinen, Jarkko J.; Toivakka, Martti; Kuusipalo, Jurkka. Materials Research Society Symposium Proceedings. Vol. 1747 MATERIALS RESEARCH SOCIETY, 2015. p. 37-42. Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**End-plate connections in Bi-axial bending - Measurements.** / Mäkinen, Jari; Fränti, Keijo; Korhonen, Matti; Fillion, Joshua; Heinisuo, Markku.

13th International Aluminium Conference, Sustainability, Durability and Structural Advantages, : INALCO 2016; Naples; Italy; 21 September 2016 through 23 September 2016. ed. / F. M. Mazzolani; A. Squillace; B. Faggiano; F. Bellucci . Vol. 710 Trans Tech Publications Ltd, 2016. p. 275-280 (Key Engineering Materials; Vol. 710).

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

**Inertial Sensor-Based State Estimation of Flexible Links Subject to Bending and Torsion.** / Mäkinen, Petri; Mononen, Teemu; Mattila, Jouni.

2018 14th IEEE/ASME International Conference on Mechatronics and Embedded Systems and Applications, MESA 2018. IEEE, 2018. 8449188.

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

**Development of expanded graphite filled natural rubber vulcanizates in presence and absence of carbon black : Mechanical, thermal and morphological properties.** / Malas, Asish; Das, Chapal Kumar; Das, Amit; Heinrich, Gert.

In: Materials and Design, Vol. 39, 2012, p. 410-417.

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

**Prediction of contact condition and surface damage by simulating variable friction coefficient and wear.** / Mäntylä, A.; Hintikka, J.; Frondelius, T.; Vaara, J.; Lehtovaara, A.; Juoksukangas, J.

In: Tribology International, 05.11.2019.

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

**FEM-based wear simulation for fretting contacts.** / Mäntylä, Antti; Juoksukangas, Janne; Hintikka, Jouko; Frondelius, Tero; Lehtovaara, Arto.

In: Rakenteiden Mekaniikka, Vol. 53, No. 1, 2020, p. 20-27.

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

**Tribocorrosion behaviour of two low-alloy steel grades in simulated waste solution.** / Mäntyranta, Aino; Heino, Vuokko; Isotahdon, Elisa; Salminen, Turkka; Huttunen-Saarivirta, Elina.

In: Tribology International, Vol. 138, 01.10.2019, p. 250-262.

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

**Branched thiophene oligomer/polymer bulk heterojunction organic solar cell.** / Martinez, Francisco; Neculqueo, Gloria; Vasquez, Sergio O.; Lemmetyinen, Helge; Efimov, Alexander; Vivo, Paola.

Materials Research Society Symposium Proceedings. Vol. 1737 MATERIALS RESEARCH SOCIETY, 2015. p. 19-25.

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

**Chip-by-chip configurable interconnection using digital printing techniques.** / Mashayekhi, Mohammad; Winchester, Lee; Laurila, Mika-Matti; Mäntysalo, Matti; Ogier, Simon; Terés, Lluís; Carrabina, Jordi.

In: Journal of Micromechanics and Microengineering, Vol. 27, No. 4, 045009, 06.03.2017.

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

**Slurry and dry particle erosion wear properties of WC-10Co4Cr and Cr<sub>3</sub>C<sub>2</sub>-25NiCr hardmetal coatings deposited by HVOF and HVAF spray processes.** / Matikainen, V.; Rubio Peregrina, S.; Ojala, N.; Koivuluoto, H.; Schubert, J.; Houdková, ; Vuoristo, P.

In: Tribologia, Vol. 36, No. 1-2, 2019, p. 58-61.

Research output: Contribution to journal > Article > Scientific

**Evaluation of parts of a boat cabin based on exergy - Focusing on environmental and economic assessments.** / Medyna, Galina; Coatanea, Eric; Millet, Dominique.

ASME 2011 International Mechanical Engineering Congress and Exposition, IMECE 2011. Vol. 4 PARTS A AND B. ed. AMER SOC MECHANICAL ENGINEERS, 2011. p. 1083-1092.

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

**Evaluating the electrode measurement sensitivity of subdermal electroencephalography electrodes.** / Mendes, Miguel Rodrigues; Subramaniyam, Narayan Puthanmadam; Wendel-Mitoraj, Katrina.  
International IEEE/EMBS Conference on Neural Engineering, NER. Vol. 2015-July IEEE COMPUTER SOCIETY PRESS, 2015. p. 1092-1095.

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

**A comparison of five optical surface topography measurement methods.** / Mettänen, Marja; Hirn, Ulrich.  
In: TAPPI Journal, Vol. 14, No. 1, 01.01.2015, p. 27-38.

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

**Solar Panel Breakage During Heavy Rain Caused by Thermal Stress.** / Mikkonen, Antti; Karvinen, Reijo.  
Engineered Transparency 2016: Glass in Architecture and Structural Engineering. Wiley, 2016.

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

**Heat Transfer of Impinging Jet : Effect of Compressibility and Turbulent Kinetic Energy Production.** / Mikkonen, Antti ; Karvinen, Reijo.  
IX International Conference on Computational Heat and Mass Transfer (ICCHMT 2016) . 2017.

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

**Thermal, structural and in vitro dissolution of antimicrobial copper-doped and slow resorbable iron-doped phosphate glasses.** / Mishra, A.; Petit, L.; Pihl, M.; Andersson, M.; Salminen, T.; Rocherullé, J.; Massera, J.  
In: Journal of Materials Science, Vol. 52, No. 15, 2017, p. 8957–8972.

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

**Generic platform for manufacturing execution system functions in knowledge-driven manufacturing systems.** / Mohammed, Wael M.; Ramis Ferrer, Borja; Iarovyi, Sergii; Negri, Elisa; Fumagalli, Luca; Lobov, Andrei; Martinez Lastra, Jose L.

In: International Journal of Computer Integrated Manufacturing, 04.03.2018, p. 1-13.

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

**Towards an approach for evaluating the quality of requirements.** / Mokammel, Faisal; Coatanea, Eric; Christophe, Francois; Ba Khouya, Mohamed; Medyna, Galina.  
33rd Computers and Information in Engineering Conference. Vol. 2 B American Society of Mechanical Engineers, 2013. V02BT02A024.

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

**Position Estimation for Drones based on Visual SLAM and IMU in GPS-denied Environment.** / Motlagh, Hamid Didari Khamseh; Lotfi, Faraz; Taghirad, Hamid D.; Germi, Saeed Bakhshi.  
ICRoM 2019 - 7th International Conference on Robotics and Mechatronics. IEEE, 2019. p. 120-124.

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

**Soft robotic gripper with compliant cell stacks for industrial part handling.** / Netzev, Metodi; Angleraud, Alexandre; Pieters, Roel.

In: IEEE Robotics and Automation Letters, Vol. 5, No. 4, 01.10.2020, p. 6821-6828.

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

**Icephobicity of Slippery Liquid Infused Porous Surfaces under Multiple Freeze–Thaw and Ice Accretion–Detachment Cycles.** / Niemelä-Anttonen, Henna; Koivuluoto, Heli; Tuominen, Mikko; Teisala, Hannu; Juuti, Paxton; Haapanen, Janne; Harra, Juha; Stenroos, Christian; Lahti, Johanna; Kuusipalo, Jurkka; Mäkelä, Jyrki M.; Vuoristo, Petri.

In: Advanced Materials Interfaces, Vol. 5, No. 20, 10.2018.

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

**Luminescence of Er<sup>3+</sup> doped oxyfluoride phosphate glasses and glass-ceramics.** / Nommeots-Nomm, A.; Boetti, N. G.; Salminen, T.; Massera, J.; Hokka, M.; Petit, L.

In: Journal of Alloys and Compounds, Vol. 751, 30.06.2018, p. 224-230.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Phosphate/oxyfluorophosphate glass crystallization and its impact on dissolution and cytotoxicity.** / Nommeots-Nomm, A.; Houaoui, A.; Pradeepan Packiyannathar, A.; Chen, X.; Hokka, M.; Hill, R.; Pauthe, E.; Petit, L.; Boissière, M.; Massera, J.  
In: Materials Science and Engineering C, Vol. 117, 111269, 2020.  
Research output: Contribution to journal > Article > Scientific > peer-review

**The formation and characterization of fretting-induced degradation layers using quenched and tempered steel.** / Nurmi, Verner; Hintikka, Jouko; Juoksukangas, Janne; Honkanen, Mari; Vippola, Minnamari; Lehtovaara, Arto; Mäntylä, Antti; Vaara, Joonas; Frondelius, Tero.  
In: Tribology International, Vol. 131, 01.03.2019, p. 258-267.  
Research output: Contribution to journal > Article > Scientific > peer-review

**CFD modeling the diffusional losses of nanocluster-sized particles and condensing vapors in 90° bends of circular tubes.** / Olin, Miska; Dal Maso, Miikka.  
In: Journal of Aerosol Science, Vol. 150, 105618, 2020.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Investigating the kinetics and biofuel properties of *Alstonia congensis* and *Ceiba pentandra* via torrefaction.** / Oluoti, Kehinde; Doddapaneni, Tharaka Rama K.C.; Richards, Tobias.  
In: Energy, Vol. 150, 01.05.2018, p. 134-141.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Enhanced multiaxial fatigue criterion that considers stress gradient effects.** / Ottosen, Niels Saabye; Ristinmaa, Matti; Kouhia, Reijo.  
In: International Journal of Fatigue, Vol. 116, 01.11.2018, p. 128-139.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Probabilistic approach to physical object disentangling.** / Pajarinen, Joni; Arenz, Oleg; Peters, Jan; Neumann, Gerhard.  
In: IEEE Robotics and Automation Letters, Vol. 5, No. 4, 2020, p. 5510-5517.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Locomotion of light-driven soft microrobots through a hydrogel via local melting.** / Palagi, Stefano; Mark, Andrew G.; Melde, Kai; Qiu, Tian; Zeng, Hao; Parmeggiani, Camilla; Martella, Daniele; Wiersma, Diederik S.; Fischer, Peer.  
International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017 - Proceedings. IEEE, 2017.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Detection beyond Debye's length with an electrolyte-gated organic field-effect transistor.** / Palazzo, Gerardo; De Tullio, Donato; Magliulo, Maria; Mallardi, Antonia; Intranuovo, Francesca; Mulla, Mohammad Yusuf; Favia, Pietro; Vikholm-Lundin, Inger; Torsi, Luisa.  
In: Advanced Materials, Vol. 27, No. 5, 2015, p. 911-916.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Comparative environmental impacts of additive and subtractive manufacturing technologies.** / Paris, Henri; Mokhtarian, Hossein; Coatanéa, Eric; Museau, Matthieu; Ituarte, Inigo Flores.  
In: CIRP Annals: Manufacturing Technology, Vol. 65, No. 1, 2016, p. 29-32.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Asymptotics and approximation of large systems of ordinary differential equations.** / Paunonen, Lassi; Seifert, David.  
In: Systems and Control Letters, Vol. 140, 104703, 2020.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Kinetics and thermochemistry of the reaction of 3-methylpropargyl radical with molecular oxygen.** / Pekkanen, Timo T.; Timonen, Raimo S.; Lendvay, György; Rissanen, Matti P.; Eskola, Arkke J.



In: PROCEEDINGS OF THE COMBUSTION INSTITUTE, Vol. 37, No. 1, 01.01.2019, p. 299-306.

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

**Vehicle type detection and passenger satisfaction analysis using smartphone sensors and digital surveys.** / Perttula, Arto; Nguyen, Nhan; Collin, Jussi; Jokinen, Jani-Pekka.

In: IET Intelligent Transport Systems, Vol. 13, No. 10, 01.10.2019, p. 1499-1506.

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

**High-order lattice-Boltzmann.** / Philippi, P. C.; Siebert, D. N.; Hegele, L. A.; Mattila, K. K.

In: Journal of the Brazilian Society of Mechanical Sciences and Engineering, Vol. 38, No. 5, 01.06.2016, p. 1401-1419.

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

**Potential of renewable fuel to reduce diesel exhaust particle emissions.** / Pirjola, Liisa; Kuuluvainen, Heino; Timonen, Hilikka; Saarikoski, Sanna; Teinilä, Kimmo; Salo, Laura; Datta, Arindam; Simonen, Pauli; Karjalainen, Panu; Kulmala, Kari; Rönkkö, Topi.

In: Applied Energy, Vol. 254, 113636, 15.11.2019.

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

**From Responsive Molecules to Interactive Materials.** / Priimägi, Arri (Editor); Hecht, Stefan (Editor).

In: Advanced Materials, Vol. 32, No. 20, 2000215, 2020.

Research output: Contribution to journal › Editorial › Scientific

**Special Issue: From Responsive Materials to Interactive Materials.** / Priimägi, Arri (Editor); Hecht, Stefan (Editor).

In: Advanced Materials, Vol. 32, No. 20, 2020.

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

**Measurements and Modeling of Frost Depth in Railway Tracks.** / Pylkkänen, Kari; Nurmikolu, Antti; Guthrie, W. Spencer; Argyle, Hillary M.

Proceedings of the International Conference on Cold Regions Engineering: 16th International Conference on Cold Regions Engineering 2015. American Society of Civil Engineers ASCE, 2015. p. 123-134.

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

**A Reduced-Order Two-Degree-of-Freedom Composite Nonlinear Feedback Control for a Rotary DC Servo Motor.** / Pyrhönen, Veli-Pekka; Koivisto, Hannu; Vilkkö, Matti.

Proceedings of the 56th IEEE Conference on Decision and Control. Melbourne, Australia, 2017. p. 2065-2071.

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

**Fabrication of a sub-10 nm silicon nanowire based ethanol sensor using block copolymer lithography.** / Rasappa, Sozaraj; Borah, Dipu; Faulkner, Colm C.; Lutz, Tarek; Shaw, Matthew T.; Holmes, Justin D.; Morris, Michael A.

In: Nanotechnology, Vol. 24, No. 6, 065503, 15.02.2013.

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

**Effect of rotor pole-shoe construction on losses of inverter-fed synchronous motors.** / Rasilo, Paavo; Belahcen, Anouar; Arkkio, Antero.

Proceedings - 2012 20th International Conference on Electrical Machines, ICEM 2012. 2012. p. 1282-1286.

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

**Effect of Multiple Impacts on the Deformation of Wear-Resistant Steels.** / Ratia, Vilma; Rojacz, Harald; Terva, Juuso; Valtonen, Kati; Badisch, Ewald; Kuokkala, Veli Tapani.

In: Tribology Letters, Vol. 57, No. 2, 15, 21.01.2015.

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

**Multiresonant High-Q Plasmonic Metasurfaces.** / Reshef, Orad; Saad-Bin-Alam, Md; Huttunen, Mikko J.; Carlow, Graham; Sullivan, Brian T.; Ménard, Jean Michel; Dolgaleva, Ksenia; Boyd, Robert W.

In: Nano Letters, Vol. 19, No. 9, 11.09.2019, p. 6429-6434.

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

**The role of niobium in improving toughness and corrosion resistance of high speed steel laser hardfacings.** / Rodríguez Ripoll, Manel; Ojala, Niko; Katsich, Christian; Totolin, Vladimir; Tomastik, Christian; Hradil, Klaudia.  
In: Materials and Design, Vol. 99, 05.06.2016, p. 509-520.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Persistent luminescent borosilicate glasses using direct particles doping method.** / Roldán Del Cerro, P.; Salminen, T.; Lastusaari, M.; Petit, L.  
In: Scripta Materialia, Vol. 151, 01.07.2018, p. 38-41.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Materials for electronics by thermal spraying.** / Ronkainen, Helena; Kanerva, Ulla; Varis, Tommi; Ruusuvoori, Kimmo; Turunen, Erja; Peräntie, Jani; Putaala, Jussi; Juuti, Jari; Jantunen, Heli.  
Physical and Numerical Simulation of Materials Processing VII. Vol. 762 2013. p. 451-456 (Materials Science Forum; Vol. 762).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Direct model predictive power control of a series-connected modular rectifier.** / Rossi, Mattia; Liegmann, Eyke; Karamanakos, Petros; Castelli-Dezza, Francesco; Kennel, Ralph.  
PRECEDE 2019: 2019 IEEE International Symposium on Predictive Control of Electrical Drives and Power Electronics. IEEE, 2019. p. 1-6.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Transparent microelectrode arrays fabricated by ion beam assisted deposition for neuronal cell in vitro recordings.** / Ryyänänen, Tomi; Mzezewa, Ropafadzo; Meriläinen, Ella; Hyvärinen, Tanja; Lekkala, Jukka; Narkilahti, Susanna; Kallio, Pasi.  
In: Micromachines, Vol. 11, No. 5, 497, 01.05.2020.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Assessment of pitting corrosion in bare and passivated (wet  $\text{scCO}_2$ -induced patination and chemical passivation) hot-dip galvanized steel samples with SVET, FTIR, and SEM (EDS).** / Saariämaa, Ville; Fuertes, Nuria; Persson, Dan; Zavalis, Tommy; Kaleva, Aaretti; Nikkanen, Juha-Pekka; Levänen, Erkki; Heydari, Golrokh.  
In: Materials and Corrosion, 2020.  
Research output: Contribution to journal > Article > Scientific > peer-review

**An origami inspired reconfigurable spiral antenna.** / Saintsing, Christy D.; Cook, Benjamin S.; Tentzeris, Manos M.  
38th Mechanisms and Robotics Conference. Vol. 5B The American Society of Mechanical Engineers ASME, 2014.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Enhanced resonant nonlinear absorption and optical limiting in  $\text{Er}^{3+}$  ions doped multicomponent tellurite glasses.** / Sajna, M. S.; Perumbilavil, Sreekanth; Prakashan, V. P.; Sanu, M. S.; Joseph, Cyriac; Biju, P. R.; Unnikrishnan, N. V.  
In: Materials Research Bulletin, Vol. 104, 01.08.2018, p. 227-235.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Assessing population vulnerability towards summer energy poverty : Case studies of Madrid and London.** / Sanchez-Guevara, Carmen; Núñez Peiró, Miguel; Taylor, Jonathon; Mavrogianni, Anna; Neila González, Javier.  
In: Energy and Buildings, Vol. 190, 01.05.2019, p. 132-143.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Barkhausen Noise Probes and Modelling : A Review.** / Santa-aho, Suvu; Laitinen, Arttu; Sorsa, Aki; Vippola, Minnamari.  
In: Journal of Nondestructive Evaluation, Vol. 38, No. 4, 94, 01.12.2019.  
Research output: Contribution to journal > Review Article > Scientific > peer-review

**Mechanically Switchable Elastomeric Microfibrillar Adhesive Surfaces for Transfer Printing.** / Sariola, Veikko; Sitti, Metin.  
In: Advanced Materials Interfaces, Vol. 1, No. 4, 1300159, 01.07.2014.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Tailoring Second-Harmonic Emission from (111)-GaAs Nanoantennas.** / Sautter, Jürgen D.; Xu, Lei; Miroshnichenko, Andrey E.; Lysevych, Mykhaylo; Volkovskaya, Irina; Smirnova, Daria A.; Camacho-Morales, Rocio; Zangeneh Kamali, Khosro; Karouta, Fouad; Vora, Kaushal; Tan, Hoe H.; Kauranen, Martti; Staude, Isabelle; Jagadish, Chennupati; Neshev, Dragomir N.; Rahmani, Mohsen.

In: Nano Letters, Vol. 19, No. 6, 12.06.2019, p. 3905-3911.

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

**An exploratory study on strengthening and thermal stability of magnetron sputtered W nanoparticles at the interface of Cu/Ni multilayer films.** / Schoepfner, R.L.; Mohanty, G.; Polyakov, M.N.; Petho, L.; Maeder, X.; Michler, J.

In: Materials and Design, Vol. 195, 108907, 2020.

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

**Synchronous Full-Field Strain and Temperature Measurement in Tensile Tests at Low, Intermediate and High Strain Rates.** / Seidt, J. D.; Kuokkala, V.-T.; Smith, J. L.; Gilat, A.

In: Experimental Mechanics, Vol. 57, No. 2, 02.2017, p. 219–229.

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

**Consideration of energy consumption, energy costs, and space occupancy in Finnish daycare centres and school buildings.** / Sekki, Tiina; Andelin, Mia; Airaksinen, Miimu; Saari, Arto.

In: Energy and Buildings, Vol. 129, 01.10.2016, p. 199-206.

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

**Impact of building usage and occupancy on energy consumption in Finnish daycare and school buildings.** / Sekki, Tiina; Airaksinen, Miimu; Saari, Arto.

In: Energy and Buildings, Vol. 105, 18.08.2015, p. 247-257.

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

**Measured energy consumption of educational buildings in a Finnish city.** / Sekki, Tiina; Airaksinen, Miimu; Saari, Arto.

In: Energy and Buildings, Vol. 87, 01.01.2015, p. 105-115.

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

**Effect of energy measures on the values of energy efficiency indicators in Finnish daycare and school buildings.** / Sekki, Tiina; Airaksinen, Miimu; Saari, Arto.

In: Energy and Buildings, Vol. 139, 15.03.2017, p. 124-132.

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

**Towards dependable automation.** / Seppälä, Jari; Salmenperä, Mikko.

Cyber Security: Analytics, Technology and Automation: Part IV. Springer International Publishing, 2015. p. 229-249 (Intelligent Systems, Control and Automation: Science and Engineering; Vol. 78).

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

**Hyperspectral phase imaging based on denoising in complex-valued eigensubspace.** / Shevkunov, Igor; Katkovnik, Vladimir; Claus, Daniel; Pedrini, Giancarlo; Petrov, Nikolay V.; Egiazarian, Karen.

In: Optics and Lasers in Engineering, Vol. 127, 105973, 01.04.2020.

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

**Introducing Multi-Convexity in Path Constrained Trajectory Optimization for Mobile Manipulators.** / Singh, Arun Kumar; Ahonen, Andrei; Ghabcheloo, Reza; Mueller, Andreas.

European Control Conference 2020, ECC 2020. IEEE, 2020. p. 1178-1185.

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

**Experimental and numerical study of wall layer development in a tribocharged fluidized bed.** / Sippola, Petteri; Kolehmainen, Jari; Ozel, Ali; Liu, Xiaoyu; Saarenrinne, Pentti; Sundaresan, Sankaran.

In: Journal of Fluid Mechanics, Vol. 849, 25.08.2018, p. 860-884.

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

**Digital image correlation study of the deformation and functioning of the human heart during open-heart surgery.** / Soltani, Ayat; Curtze, S.; Lahti, J.; Järvelä, K.; Laurikka, J.; Hokka, M.; Kuokkala, V. T.  
Mechanics of Biological Systems, Materials and other topics in Experimental and Applied Mechanics - Proceedings of the 2017 Annual Conference on Experimental and Applied Mechanics. Vol. 4 Springer New York LLC, 2018. p. 19-27 (Conference Proceedings of the Society for Experimental Mechanics).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Dynamic speckle analysis with smoothed intensity-based activity maps.** / Stoykova, Elena; Berberova, Natalia; Kim, Youngmin; Nazarova, Dimana; Ivanov, Branimir; Gotchev, Atanas; Hong, Jisoo; Kang, Hoonjong.  
In: Optics and Lasers in Engineering, Vol. 93, 01.06.2017, p. 55-65.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Highly conducting polychloroprene composites based on multi-walled carbon nanotubes and 1-butyl 3-methyl imidazolium bis(trifluoromethylsulphonyl)imide.** / Subramaniam, Kalaivani; Das, Amit; Heinrich, Gert.  
In: K GK: KAUTSCHUK GUMMI KUNSTSTOFFE, Vol. 65, No. 7-8, 07.2012, p. 44-46.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Recurrence network analysis of wide band oscillations of local field potentials from the primary motor cortex reveals rich dynamics.** / Subramaniam, Narayan Puthanmadam; Hyttinen, Jari; Hatsopoulos, Nicholas G.; Takahashi, Kazutaka.  
International IEEE/EMBS Conference on Neural Engineering, NER. IEEE COMPUTER SOCIETY PRESS, 2015. p. 960-963.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Effect of air gap on the adhesion of PET layer on cardboard substrate in extrusion coating.** / Suokas, Esa.  
16th TAPPI European PLACE Conference 2017. TAPPI Press, 2017. p. 529-544.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Effect of polyolefin molecular structure on product properties in extrusion coating.** / Suokas, Esa.  
17th Biennial TAPPI European PLACE Conference 2019. TAPPI Press, 2019. p. 89-98.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Solvothermal synthesis derived Co-Ga codoped ZnO diluted magnetic degenerated semiconductor nanocrystals.** / Šutka, Andris; Käämbre, Tanel; Joost, Urmas; Kooser, Kuno; Kook, Mati; Duarte, Roberto Felix; Kisand, Vambola; Maiorov, Mikhael; Döbelin, Nicola; Smits, Krisjanis.  
In: Journal of Alloys and Compounds, Vol. 763, 30.09.2018, p. 164-172.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Analysing traffic fluency from bus data.** / Syrjärinne, Paula; Nummenmaa, Jyrki; Thanisch, Peter; Kerminen, Riitta; Hakulinen, Esa.  
In: IET Intelligent Transport Systems, Vol. 9, No. 6, 01.08.2015, p. 566-572.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Fluorine losses in Er<sup>3+</sup> oxyfluoride phosphate glasses and glass-ceramics.** / Szczodra, A.; Mardoukhi, A.; Hokka, M.; Boetti, N. G.; Petit, L.  
In: Journal of Alloys and Compounds, Vol. 797, 15.08.2019, p. 797-803.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Optimizing ammonium adsorption on natural zeolite for wastewaters with high loads of ammonium and solids.** / Taddeo, Raffaele; Prajapati, Sumitra; Lepistö, Raghida.  
In: Journal of Porous Materials, Vol. 24, No. 6, 2017, p. 1545-1554.  
Research output: Contribution to journal › Article › Scientific › peer-review

**On the threshold based neuronal spike detection, and an objective criterion for setting the threshold.** / Tanskanen, Jarno M. A.; Kapucu, Fikret E.; Hyttinen, Jari A. K.  
International IEEE/EMBS Conference on Neural Engineering, NER. IEEE COMPUTER SOCIETY PRESS, 2015. p. 1016-1019.

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

**Superhydrophobic Coatings on Cellulose-Based Materials : Fabrication, Properties, and Applications.** / Teisala, Hannu; Tuominen, Mikko; Kuusipalo, Jurkka.

In: *Advanced Materials Interfaces*, Vol. 1, No. 1, 1300026, 01.02.2014, p. 1-20.

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

**Nanoparticle deposition on packaging materials by the liquid flame spray.** / Teisala, Hannu; Tuominen, Mikko; Aromaa, Mikko; Mäkelä, Jyrki M.; Stepien, Milena; Saarinen, Jarkko J.; Toivakka, Martti; Kuusipalo, Jurkka.  
13th European PLACE Conference 2011. Vol. 1 2011.

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

**Ultrafast Processing of Hierarchical Nanotexture for a Transparent Superamphiphobic Coating with Extremely Low Roll-Off Angle and High Impalement Pressure.** / Teisala, Hannu; Geyer, Florian; Haapanen, Janne; Juuti, Paxton; Mäkelä, Jyrki M.; Vollmer, Doris; Butt, Hans Jürgen.

In: *Advanced Materials*, Vol. 30, No. 14, 1706529, 2018.

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

**Real-time and Robust Collaborative Robot Motion Control with Microsoft Kinect @ v2.** / Teke, Burak; Lanz, Minna; Kämäräinen, Joni-Kristian; Hietanen, Antti.

2018 14th IEEE/ASME International Conference on Mechatronics and Embedded Systems and Applications, MESA 2018. IEEE, 2018. 8449156.

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

**Elevated and cryogenic temperature micropillar compression of magnesium–niobium multilayer films.** / Thomas, K.; Mohanty, G.; Wehrs, J.; Taylor, A. A.; Pathak, S.; Casari, D.; Schwiedrzik, J.; Mara, N.; Spolenak, R.; Michler, J.

In: *Journal of Materials Science*, Vol. 54, No. 15, 15.08.2019, p. 10884-10901.

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

**Optimised selection of new protective coatings for biofuel boiler applications.** / Tuurna, S.; Varis, T.; Penttilä, K.; Ruusuvaari, K.; Holmström, S.; Yli-Olli, S.

In: *Materials and Corrosion-Werkstoffe und Korrosion*, Vol. 62, No. 7, 07.2011, p. 642-649.

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

**High performance natural rubber composites with a hierarchical reinforcement structure of carbon nanotube modified natural fibers.** / Tzounis, Lazaros; Debnath, Subhas; Rooj, Sandip; Fischer, Dieter; Mäder, Edith; Das, Amit; Stamm, Manfred; Heinrich, Gert.

In: *Materials and Design*, Vol. 58, 2014, p. 1-11.

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

**Effect of pre-treatments on barrier properties of layers applied by atomic layer deposition onto polymer-coated substrates.** / Vähä-Nissi, M.; Hirvikorpi, T.; Sievänen, J.; Salo, E.; Harlin, A.; Johansson, P.; Kuusipalo, J.

13th European PLACE Conference 2011. Vol. 1 2011. p. 447.

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

**Conjugated Heat Transfer Simulation of a Fin-and-Tube Heat Exchanger.** / Välikangas, Turo; Karvinen, Reijo.

In: *Heat Transfer Engineering*, Vol. 39, No. 13-14, 2018, p. 1192-1200.

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

**Fin-and-tube heat exchanger enhancement with a combined herringbone and vortex generator design.** / Välikangas, Turo; Singh, Shobhana; Sørensen, Kim; Condra, Thomas.

In: *International Journal of Heat and Mass Transfer*, Vol. 118, 2018, p. 602-616.

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

**Deposition of dry particles on a fin-and-tube heat exchanger by a coupled soft-sphere DEM and CFD.** / Välikangas, Turo; Hærvig, Jakob; Kuuluvainen, Heino; Dal Maso, Miikka; Peltonen, Petteri; Vuorinen, Ville.

In: International Journal of Heat and Mass Transfer, 2019.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Impact wear and mechanical behavior of steels at subzero temperatures.** / Valtonen, Kati; Ratia, Vilma; Ramakrishnan, Karthik Ram; Apostol, Marian; Terva, Juuso; Kuokkala, Veli-Tapani.

In: Tribology International, Vol. 129, 2019, p. 476-493.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Effects of adiabatic heating estimated from tensile tests with continuous heating.** / Vazquez Fernandez, N.; Isakov, M.; Hokka, M.; Kuokkala, V. T.

Dynamic Behavior of Materials - Proceedings of the 2017 Annual Conference on Experimental and Applied Mechanics. Vol. 1 Springer New York LLC, 2018. p. 1-7 (Conference Proceedings of the Society for Experimental Mechanics).

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

**Low temperature afterglow from SrAl<sub>2</sub>O<sub>4</sub> : Eu, Dy, B containing glass.** / Vitola, V.; Lahti, V.; Bite, I.; Spustaka, A.; Millers, D.; Lastusaari, M.; Petit, L.; Smits, K.

In: Scripta Materialia, Vol. 190, 2020, p. 86-90.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Erosive-abrasive wear behavior of carbide-free bainitic and boron steels compared in simulated field conditions.** / Vuorinen, E.; Heino, V.; Ojala, N.; Haiko, O.; Hedayati, A.

In: Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, Vol. 232, No. 1, 2018, p. 3-13.

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

**Bioactive glass ions induce efficient osteogenic differentiation of human adipose stem cells encapsulated in gellan gum and collagen type I hydrogels.** / Vuornos, Kaisa; Ojansivu, Miina; Koivisto, Janne T.; Häkkänen, Heikki; Belay, Birhanu; Montonen, Toni; Huhtala, Heini; Kääriäinen, Minna; Hupa, Leena; Kellomäki, Minna; Hyttinen, Jari; Ihalainen, Janne A.; Miettinen, Susanna.

In: Materials Science and Engineering C, Vol. 99, 01.06.2019, p. 905-918.

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

**Do properties of bioactive glasses exhibit mixed alkali behavior?** / Wang, Xiaoju; Fagerlund, Susanne; Massera, Jonathan; Södergård, Berndt; Hupa, Leena.

In: Journal of Materials Science, Vol. 52, No. 15, 2017, p. 8986-8997.

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

**Co-electrospun blends of PU and PEG as potential biocompatible scaffolds for small-diameter vascular tissue engineering.** / Wang, Heyun; Feng, Yakai; Fang, Zichen; Yuan, Wenjie; Khan, Musammir.

In: Materials Science and Engineering C: Materials for Biological Applications, Vol. 32, No. 8, 01.12.2012, p. 2306-2315.

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

**An Artificial Nocturnal Flower via Humidity-Gated Photoactuation in Liquid Crystal Networks.** / Wani, Owies M.; Verpaalen, Rob; Zeng, Hao; Priimagi, Arri; Schenning, Albert P.H.J.

In: Advanced Materials, Vol. 31, No. 2, 1805985, 01.2019.

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

**Operating point dependent variable switching point predictive current control for PMSM drives.** / Wendel, Sebastian; Karamanakos, Petros; Dietz, Armin; Kennel, Ralph.

PRECEDE 2019: 2019 IEEE International Symposium on Predictive Control of Electrical Drives and Power Electronics. IEEE, 2019. p. 1-6.

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

**Transfer printing of metallic microstructures on adhesion-promoting hydrogel substrates.** / Wu, Haosheng; Sariola, Veikko; Zhu, Congcong; Zhao, Jingsi; Sitti, Metin; Bettinger, Christopher J.

In: Advanced Materials, Vol. 27, No. 22, 01.06.2015, p. 3398-3404.

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

**Dimension reduction and decomposition using causal graph and qualitative analysis for aircraft concept design optimization.** / Wu, Di; Coatanea, Eric; Wang, G. Gary.

43rd Design Automation Conference. The American Society of Mechanical Engineers ASME, 2017.

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

**Employing Knowledge on Causal Relationship to Assist Multidisciplinary Design Optimization.** / Wu, Di; Coatanea, Eric; Wang, G. Gary.

In: Journal of Mechanical Design, Transactions of the ASME, Vol. 141, No. 4, 041402, 04.2019.

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

**Biomimetic hemo-compatible surfaces of polyurethane by grafting copolymer brushes of poly(ethylene glycol) and poly(phosphorylcholine methacrylate).** / Yang, Dazhi; Feng, Yakai; Behl, Marc; Lendlein, Andreas; Zhao, Haiyang; Khan, Musamir; Guo, Jintang.

Multifunctional Polymer-Based Materials. Vol. 1403 2012. p. 171-176.

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

**Shedding frequency in cavitation erosion evolution tracking.** / Ylönen, Markku; Franc, Jean Pierre; Miettinen, Juha; Saarenrinne, Pentti; Fivel, Marc.

In: International Journal of Multiphase Flow, Vol. 118, 01.09.2019, p. 141-149.

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

**Light Robots: Bridging the Gap between Microrobotics and Photomechanics in Soft Materials.** / Zeng, Hao; Wasylczyk, Piotr; Wiersma, Diederik S.; Priimagi, Arri.

In: Advanced Materials, Vol. 30, No. 24, 1703554, 2018.

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

**Viewpoint : Pavlovian Materials—Functional Biomimetics Inspired by Classical Conditioning.** / Zhang, Hang; Zeng, Hao; Priimagi, Arri; Ikkala, Olli.

In: Advanced Materials, 2020.

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