

### **Barkhausen Noise Probes and Modelling: A Review**

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

### **A framework for building behavioral models for design-stage failure identification using dimensional analysis**

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

### **An origami inspired reconfigurable spiral antenna**

Saintsing, C. D., Cook, B. S. & Tentzeris, M. M., 2014, *38th Mechanisms and Robotics Conference*. The American Society of Mechanical Engineers ASME, Vol. 5B.

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, V-P., Koivisto, H. & Viikko, M., 12 Dec 2017, *Proceedings of the 56th IEEE Conference on Decision and Control*. Melbourne, Australia, p. 2065-2071 7 p.

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**

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### **Biomimetic hemo-compatible surfaces of polyurethane by grafting copolymer brushes of poly(ethylene glycol) and poly(phosphorylcholine methacrylate)**

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### **Complete Odometry Estimation of a Vehicle Using Single Automotive Radar and a Gyroscope**

Ghabcheloo, R. & Siddiqui, S., 20 Aug 2018, *MED 2018 - 26th Mediterranean Conference on Control and Automation*. IEEE, p. 855-860 6 p. 8442474

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

### **Design and Control of a Flexible Joint as a Hydraulic Series Elastic Actuator for Manipulation Applications**

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

#### **Development and numerical implementation of an anisotropic continuum damage model for concrete**

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#### **DIC measurements of the human heart during cardiopulmonary bypass surgery**

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

#### **Digital image correlation study of the deformation and functioning of the human heart during open-heart surgery**

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#### **Dimension reduction and decomposition using causal graph and qualitative analysis for aircraft concept design optimization**

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

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#### **Effect of air gap on the adhesion of PET layer on cardboard substrate in extrusion coating**

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

#### **Effect of polyolefin molecular structure on product properties in extrusion coating**

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

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#### **Fabrication of soft devices with buried fluid channels by using sacrificial 3D printed molds**

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**Inertial Sensor-Based State Estimation of Flexible Links Subject to Bending and Torsion**

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**Introducing Multi-Convexity in Path Constrained Trajectory Optimization for Mobile Manipulators**

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**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**

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**Locomotion of light-driven soft microrobots through a hydrogel via local melting**

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**M-Estimator Application in Real-Time Sensor Fusion for Smooth Position Feedback of Heavy-Duty Field Robots**

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### **Model Order Reduction of Bearingless Reluctance Motor Including Eccentricity**

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#### **Role-based visualization of industrial IoT-based systems**

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Tampere University of Technology, laboratory of materials science, paper converting and packaging technology Tampere, Finland

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

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#### **Waves in hyperbolic and double negative metamaterials including rogues and solitons**

Boardman, A. D., Alberucci, A., Assanto, G., Grimalsky, V. V., Kibler, B., McNiff, J., Nefedov, I. S., Rapoport, Y. G. & Valagiannopoulos, C. A., 9 Oct 2017, In : *Nanotechnology*. 28, 44, 444001.

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

#### **A comparison of five optical surface topography measurement methods**

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#### **A comparison of relative displacement fields between numerical predictions and experimental results in fretting contact**

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**Adaptive and nonlinear control of discharge pressure for variable displacement axial piston pumps**

Koivumäki, J. & Mattila, J., 1 Oct 2017, In : Journal of Dynamic Systems, Measurement and Control: Transactions of the ASME. 139, 10, 101008.

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

**Analysing traffic fluency from bus data**

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Gashti, E. H. N., Malaska, M. & Kujala, K., 11 Aug 2015, In : Energy and Buildings. 105, p. 1-8 8 p.

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

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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., May 2013, In : Optics and Lasers in Engineering. 51, 5, p. 633-636 4 p.

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**An exploratory study on strengthening and thermal stability of magnetron sputtered W nanoparticles at the interface of Cu/Ni multilayer films**

Schoeppner, R. L., Mohanty, G., Polyakov, M. N., Petho, L., Maeder, X. & Michler, J., 2020, In : Materials and Design. 195, 9 p., 108907.

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

**Assessing population vulnerability towards summer energy poverty: Case studies of Madrid and London**

Sanchez-Guevara, C., Núñez Peiró, M., Taylor, J., Mavrogianni, A. & Neila González, J., 1 May 2019, In : Energy and Buildings. 190, p. 132-143 12 p.

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**Assessment of pitting corrosion in bare and passivated (wet scCO<sub>2</sub>-induced patination and chemical passivation) hot-dip galvanized steel samples with SVET, FTIR, and SEM (EDS)**

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### **Avoiding the high friction peak in fretting contact**

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

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### **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., 2019, In : Tribology International. 129, p. 257-271 15 p.

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### **Bioactive glass ions induce efficient osteogenic differentiation of human adipose stem cells encapsulated in gellan gum and collagen type I hydrogels**

Vuornos, K., Ojansivu, M., Koivisto, J. T., Häkkänen, H., Belay, B., Montonen, T., Huhtala, H., Kääriäinen, M., Hupa, L., Kellomäki, M., Hyttinen, J., Ihalainen, J. A. & Miettinen, S., 1 Jun 2019, In : Materials Science and Engineering C. 99, p. 905-918 14 p.

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### **CFD modeling the diffusional losses of nanocluster-sized particles and condensing vapors in 90° bends of circular tubes**

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### **Characterization of cracks formed in large flat-on-flat fretting contact**

Juoksukangas, J., Nurmi, V., Hintikka, J., Vippola, M., Lehtovaara, A., Mäntylä, A., Vaara, J. & Frondelius, T., Jul 2019, In : International Journal of Fatigue. 124, p. 361-370 10 p.

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

### **Characterization of the microstructure and corrosion performance of Ce-alloyed Nd-Fe-B magnets**

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### **Chemically tailored dielectric-to-metal transition for the design of metamaterials from nanoimprinted colloidal nanocrystals**

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### **Chemical synthesis of WC-Co from water-soluble precursors: The effect of carbon and cobalt additions to WC synthesis**

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

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### **Circular dichroism in the second harmonic field evidenced by asymmetric Au coated GaAs nanowires**

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**Co-electrospun blends of PU and PEG as potential biocompatible scaffolds for small-diameter vascular tissue engineering**  
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**Computational design of a novel medium-carbon, low-alloy steel microalloyed with niobium**

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**Conductivity control via minimally invasive anti-Frenkel defects in a functional oxide**

Evans, D. M., Holstad, T. S., Mosberg, A. B., Småbråten, D. R., Vullum, P. E., Dadlani, A. L., Shapovalov, K., Yan, Z., Bourret, E., Gao, D., Akola, J., Torgersen, J., van Helvoort, A. T. J., Selbach, S. M. & Meier, D., 2020, In : *Nature Materials*. 7 p.

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**Conjugated Heat Transfer Simulation of a Fin-and-Tube Heat Exchanger**

Välikangas, T. & Karvinen, R., 2018, In : *Heat Transfer Engineering*. 39, 13-14, p. 1192-1200 9 p.

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**Consideration of energy consumption, energy costs, and space occupancy in Finnish daycare centres and school buildings**

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**Controlling liquid spreading using microfabricated undercut edges**

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**Corrosion mechanisms of sintered Nd-Fe-B magnets in the presence of water as vapour, pressurised vapour and liquid**

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

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**Deposition of dry particles on a fin-and-tube heat exchanger by a coupled soft-sphere DEM and CFD**

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**Detection beyond Debye's length with an electrolyte-gated organic field-effect transistor**

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**Development of expanded graphite filled natural rubber vulcanizates in presence and absence of carbon black: Mechanical, thermal and morphological properties**

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**Differential basal-to-apical accessibility of lamin A/C epitopes in the nuclear lamina regulated by changes in cytoskeletal tension**

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**Dissolution, bioactivity and osteogenic properties of composites based on polymer and silicate or borosilicate bioactive glass**

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**Diverter remote handling for DEMO: Concept design and preliminary FMECA studies**

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**Do properties of bioactive glasses exhibit mixed alkali behavior?**

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**Effect of energy measures on the values of energy efficiency indicators in Finnish daycare and school buildings**

Sekki, T., Airaksinen, M. & Saari, A., 15 Mar 2017, In : Energy and Buildings. 139, p. 124-132 9 p.

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**

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**Effects of strain rate and confining pressure on the compressive behavior of Kuru granite**

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**Electrolyte-gated organic field-effect transistor sensors based on supported biotinylated phospholipid bilayer**

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**Elevated and cryogenic temperature micropillar compression of magnesium–niobium multilayer films**

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**Enhanced resonant nonlinear absorption and optical limiting in Er<sup>3+</sup> ions doped multicomponent tellurite glasses**

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**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**

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**Erosive-abrasive wear behavior of carbide-free bainitic and boron steels compared in simulated field conditions**  
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**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, S., Ginestet, S., Bonhomme, M., Escadeillas, G., Taylor, J., Marincioni, V., Korolija, I. & Altamirano, H., 1 Jan 2019, In : Energy and Buildings. 182, p. 196-204 9 p.  
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**Experimental study on the behavior of wear resistant steels under high velocity single particle impacts**  
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**Fabrication of a sub-10 nm silicon nanowire based ethanol sensor using block copolymer lithography**  
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**Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> Nano-heterostructure Photoanodes for Highly Efficient Solar Water Oxidation**  
Bařreca, D., Carraro, G., Gasparotto, A., Maccato, C., Warwick, M. E. A., Kaunisto, K., Sada, C., Turner, S., Gönüllü, Y., Ruoko, T-P., Borgese, L., Bontempi, E., Van Tendeloo, G., Lemmetyinen, H. & Mathur, S., 2015, In : Advanced Materials Interfaces. 2, 17  
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**Fin-and-tube heat exchanger enhancement with a combined herringbone and vortex generator design**  
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**Fluorine losses in Er<sup>3+</sup> oxyfluoride phosphate glasses and glass-ceramics**  
Szczořda, A., Mardoukhi, A., Hokka, M., Boetti, N. G. & Petit, L., 15 Aug 2019, In : Journal of Alloys and Compounds. 797, p. 797-803 7 p.

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**Fretting-induced friction and wear in large flat-on-flat contact with quenched and tempered steel**

Hintikka, J., Lehtovaara, A. & Mäntylä, A., 2 Jul 2015, In : Tribology International. 92, p. 191-202 12 p.

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**Generic platform for manufacturing execution system functions in knowledge-driven manufacturing systems**

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**Global energy consumption due to friction and wear in the mining industry**

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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**

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**Hexaferrite/polyethylene Composite coatings prepared with flame spraying**

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**Highly conducting polychloroprene composites based on multi-walled carbon nanotubes and 1-butyl 3-methyl imidazolium bis(trifluoromethylsulphonyl)imide**

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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, L., Debnath, S., Rooj, S., Fischer, D., Mäder, E., Das, A., Stamm, M. & Heinrich, G., 2014, In : Materials and Design. 58, p. 1-11 11 p.

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

**Hot-box measurements to investigate the internal convection of highly insulated loose-fill insulation roof structures**

Kivioja, H. & Vinha, J., 1 Jun 2020, In : Energy and Buildings. 216, 10 p., 109934.

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, L., Karvinen, J., Sorsa, E., Jönkkäri, I., Väliäho, J., Kallio, P., Ilmarinen, T., Miettinen, S., Skottman, H. & Kellomäki, M., Apr 2018, In : Materials Science and Engineering C. 85, p. 68-78 11 p.

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

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

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

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

### **Icephobicity of Slippery Liquid Infused Porous Surfaces under Multiple Freeze–Thaw and Ice Accretion–Detachment Cycles**

Niemelä-Anttonen, H., Koivuluoto, H., Tuominen, M., Teisala, H., Juuti, P., Haapanen, J., Harra, J., Stenroos, C., Lahti, J., Kuusipalo, J., Mäkelä, J. M. & Vuoristo, P., Oct 2018, In : *Advanced Materials Interfaces*. 5, 20

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

### **ILC1 drive intestinal epithelial and matrix remodelling**

Jowett, G. M., Norman, M. D. A., Yu, T. T. L., Rosell Arévalo, P., Hoogland, D., Lust, S. T., Read, E., Hamrud, E., Walters, N. J., Niazi, U., Chung, M. W. H., Marciano, D., Omer, O. S., Zabinski, T., Danovi, D., Lord, G. M., Hilborn, J., Evans, N. D., Dreiss, C. A., Bozec, L., Oommen, O. P., Lorenz, C. D., da Silva, R. M. P., Neves, J. F. & Gentleman, E., 2020, In : *Nature Materials*. 22 p.

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, T., Airaksinen, M. & Saari, A., 18 Aug 2015, In : *Energy and Buildings*. 105, p. 247-257 11 p.

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

### **Impact wear and mechanical behavior of steels at subzero temperatures**

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

### **Implementation of a direct procedure for critical point computations using preconditioned iterative solvers**

Kouhia, R., Tüma, M., Mäkinen, J., Fedoroff, A. & Marjamäki, H., Oct 2012, In : *Computers & Structures*. 108-109, p. 110-117 8 p.

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

### **Improved dimensional stability with bioactive glass fibre skeleton in poly(lactide-co-glycolide) porous scaffolds for tissue engineering**

Haaparanta, A-M., Uppstu, P., Hannula, M., Ellä, V., Rosling, A. & Kellomäki, M., 20 Jul 2015, In : *Materials Science and Engineering C: Materials for Biological Applications*. 56, p. 457-466 10 p., 5584.

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### **Improving the thermal performance of concrete-sandwich envelopes in relation to the moisture behaviour of building structures in boreal conditions**

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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, L., Norpoth, J., Eicher, S., Rodríguez Ripoll, M. & Vuoristo, P., 15 May 2016, In : *Materials and Design*. 98, p. 135-142 8 p.

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**

Korkiakoski, S., Brøndsted, P., Sarlin, E. & Saarela, O., 1 Apr 2016, In : *International Journal of Fatigue*. 85, p. 114-129 16 p.

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

### **Investigating the kinetics and biofuel properties of *Alstonia congensis* and *Ceiba pentandra* via torrefaction**

Oluoti, K., Doddapaneni, T. R. K. C. & Richards, T., 1 May 2018, In : *Energy*. 150, p. 134-141 8 p.

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

### **Investigation on positioning control strategy and switching optimization of an equal coded digital valve system**

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#### **Kinetics and thermochemistry of the reaction of 3-methylpropargyl radical with molecular oxygen**

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#### **Kirigami-Based Light-Induced Shape-Morphing and Locomotion**

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

Czaplicki, R., Kiviniemi, A., Huttunen, M. J., Zang, X., Stolt, T., Vartiainen, I., Butet, J., Kuittinen, M., Martin, O. J. F. & Kauranen, M., 12 Dec 2018, In : Nano Letters. 18, 12, p. 7709-7714 6 p.

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#### **Light Robots: Bridging the Gap between Microrobotics and Photomechanics in Soft Materials**

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

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#### **Low temperature afterglow from SrAl<sub>2</sub>O<sub>4</sub>: Eu, Dy, B containing glass**

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#### **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., 30 Jun 2018, In : Journal of Alloys and Compounds. 751, p. 224-230 7 p.

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Sekki, T., Airaksinen, M. & Saari, A., 1 Jan 2015, In : Energy and Buildings. 87, p. 105-115 11 p.

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#### **Multicriteria selection in concept design of a divertor remote maintenance port in the EU DEMO reactor using an AHP participative approach**

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#### **Multi-sensor next-best-view planning as matroid-constrained submodular maximization**

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

Debnath, S. C., Das, A., Basu, D. & Heinrich, G., Jan 2013, In : KGK: KAUTSCHUK GUMMI KUNSTSTOFFE. 66, 1-2, p. 25-31 7 p.

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#### **New design of textile light diffusers for photodynamic therapy**

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#### **Noncovalent functionalization of reduced graphene oxide with pluronic F127 and its nanocomposites with gum arabic**

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#### **Nonlinear model predictive energy management of hydrostatic drive transmissions**

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#### **Normal displacements in non-Coulomb friction conditions during fretting**

Hintikka, J., Lehtovaara, A. & Mäntylä, A., 2016, In : Tribology International. 94, p. 633-639

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#### **On the effect of deformation twinning and microstructure to strain hardening of high manganese austenitic steel 3D microstructure aggregates at large strains**

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#### **Optimised selection of new protective coatings for biofuel boiler applications**

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**Optimizing ammonium adsorption on natural zeolite for wastewaters with high loads of ammonium and solids**

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**Persistent luminescent borosilicate glasses using direct particles doping method**

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**Phosphate/oxyfluorophosphate glass crystallization and its impact on dissolution and cytotoxicity**

Nommeots-Nomm, A., Houaoui, A., Pradeepan Packiyathanar, A., Chen, X., Hokka, M., Hill, R., Pauthe, E., Petit, L., Boissière, M. & Massera, J., 2020, In : Materials Science and Engineering C. 117, 15 p., 111269.

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**Pneumatic unidirectional cell stretching device for mechanobiological studies of cardiomyocytes**

Kreutzer, J., Viehrig, M., Pölonen, R. P., Zhao, F., Ojala, M., Aalto-Setälä, K. & Kallio, P., 23 Aug 2019, In : BIOMECHANICS AND MODELING IN MECHANOBIOLOGY.

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**Potential of renewable fuel to reduce diesel exhaust particle emissions**

Pirjola, L., Kuuluvainen, H., Timonen, H., Saarikoski, S., Teinilä, K., Salo, L., Datta, A., Simonen, P., Karjalainen, P., Kulmala, K. & Rönkkö, T., 15 Nov 2019, In : Applied Energy. 254, 113636.

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**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., 5 Nov 2019, In : Tribology International. 11 p., 106054.

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**Probabilistic approach to physical object disentangling**

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

Ahmed, R., Priimagi, A., Faul, C. F. J. & Manners, I., 14 Feb 2012, In : Advanced Materials. 24, 7, p. 926-931 6 p.

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

Alanen, J., Ruiz Morales, E., Muhammad, A., Saarinen, H. & Minkkinen, J., 2019, In : Fusion Engineering and Design.

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**Running-in effects on friction of journal bearings under slow sliding speeds**

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**Running-in in fretting, transition from near-stable friction regime to gross sliding**

Hintikka, J., Mäntylä, A., Vaara, J., Frondelius, T., Juoksukangas, J. & Lehtovaara, A., Nov 2019, In : Tribology International. 143, 9 p., 106073.

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**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., 14 Jan 2015, In : Nano Letters. 15, 1, p. 530-534 5 p.

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### **Second-harmonic generation imaging of semiconductor nanowires with focused vector beams**

Bautista, G., Mäkitalo, J., Chen, Y., Dhaka, V., Grasso, M., Karvonen, L., Jiang, H., Huttunen, M. J., Huhtio, T., Lipsanen, H. & Kauranen, M., 6 Feb 2015, In : Nano Letters. 15, 3, p. 1564-1569 6 p.

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

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### **Smart Skins: Could they be the ultimate sensing tool? Today's uFFFDs industry and personal medical care both strongly demand accurate, reliable, robust, lo**

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### **Solvothermal synthesis derived Co-Ga codoped ZnO diluted magnetic degenerated semiconductor nanocrystals**

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### **Spodumene tailings for porcelain and structural materials: Effect of temperature (1050–1200°C) on the sintering and properties**

Lemougna, P. N., Yliniemi, J., Ismailov, A., Levänen, E., Tanskanen, P., Kinnunen, P., Roning, J. & Illikainen, M., 2019, (Accepted/In press) In : Minerals Engineering. 105843.

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### **Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells**

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### **Stable and unstable friction in fretting contacts**

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

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**Synchronous Full-Field Strain and Temperature Measurement in Tensile Tests at Low, Intermediate and High Strain Rates**

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**Syndecan-4 tunes cell mechanics by activating the kindlin-integrin-RhoA pathway**

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**Tailoring Second-Harmonic Emission from (111)-GaAs Nanoantennas**

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Doddapaneni, T. R. K. C., Praveenkumar, R., Tolvanen, H., Rintala, J. & Kontinen, J., 2018, In : Applied Energy. 213, p. 272-284 13 p.

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**The correlation between gear contact friction and ball on disc friction measurements**

Björling, M., Miettinen, J., Marklund, P., Lehtovaara, A. & Larsson, R., 2015, In : Tribology International. 83, p. 114-119 6 p.

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**The deformation, strain hardening, and wear behavior of chromium-alloyed hadfield steel in abrasive and impact conditions**

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**The effect of initial microstructure on the final properties of press hardened 22MnB5 steels**

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**The effect of phosphorous and arsenic on the fracture behaviour of a 2,25% Cr-1% Mo Steel**

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**The formation and characterization of fretting-induced degradation layers using quenched and tempered steel**

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### **The potential of electric trucks – An international commodity-level analysis**

Liimatainen, H., van Vliet, O. & Aplyn, D., 15 Feb 2019, In : Applied Energy. 236, p. 804-814 11 p.

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### **Thermal, structural and in vitro dissolution of antimicrobial copper-doped and slow resorbable iron-doped phosphate glasses**

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### **The role of niobium in improving toughness and corrosion resistance of high speed steel laser hardfacings**

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### **Third Particle Ejection Effects on Wear with Quenched and Tempered Steel Fretting Contact**

Hintikka, J., Lehtovaara, A. & Mäntylä, A., 2017, In : TRIBOLOGY TRANSACTIONS. 60, 1, p. 70-78 9 p.

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### **TOpt: a flexible framework for optimising energy management for various ship machinery topologies**

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

### **Toward the Atomically Abrupt Interfaces of SiO<sub>x</sub>/Semiconductor Junctions**

Kuzmin, M., Laukkanen, P., Mäkelä, J., Yasir, M., Tuominen, M., Dahl, J., Punkkinen, M. P. J., Kokko, K., Hedman, H. P., Moon, J., Punkkinen, R., Lastusaari, M., Polojärvi, V., Korpijärvi, V-M. & Guina, M., Jun 2016, In : Advanced Materials Interfaces. 3, 11, 1500510.

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

### **Transfer printing of metallic microstructures on adhesion-promoting hydrogel substrates**

Wu, H., Sariola, V., Zhu, C., Zhao, J., Sitti, M. & Bettinger, C. J., 1 Jun 2015, In : Advanced Materials. 27, 22, p. 3398-3404 7 p.

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

### **Transparent microelectrode arrays fabricated by ion beam assisted deposition for neuronal cell in vitro recordings**

Ryynänen, T., Mzezewa, R., Meriläinen, E., Hyvärinen, T., Lekkala, J., Narkilahti, S. & Kallio, P., 1 May 2020, In : Micromachines. 11, 5, 497.

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., 1 Nov 2020, In : Tribology International. 151, 106389.

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

### **Tribocorrosion behaviour of two low-alloy steel grades in simulated waste solution**

Mäntyranta, A., Heino, V., Isotahdon, E., Salminen, T. & Huttunen-Saarivirta, E., 1 Oct 2019, In : Tribology International. 138, p. 250-262 13 p.

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

### **Ultrafast Processing of Hierarchical Nanotexture for a Transparent Superamphiphobic Coating with Extremely Low Roll-Off Angle and High Impalement Pressure**

Teisala, H., Geyer, F., Haapanen, J., Juuti, P., Mäkelä, J. M., Vollmer, D. & Butt, H. J., 2018, In : Advanced Materials. 30, 14, 1706529.

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

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

Barreca, D., Carraro, G., Gasparotto, A., Maccato, C., Altantzis, T., Sada, C., Kaunisto, K., Ruoko, T-P. & Bals, S., 2017, In : *Advanced Materials Interfaces*. 4, 18, 1700161.

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

**Variable speed digital hydraulic transformer-based servo drive**

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

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

**Variable speed drive with hydraulic boost**

Linjama, M., 2019, In : *International Journal of Fluid Power*. 20, 1, p. 99-123 25 p.

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

**Vehicle type detection and passenger satisfaction analysis using smartphone sensors and digital surveys**

Perttula, A., Nguyen, N., Collin, J. & Jokinen, J-P., 1 Oct 2019, In : *IET Intelligent Transport Systems*. 13, 10, p. 1499-1506 8 p.

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

**Viewpoint: Pavlovian Materials—Functional Biomimetics Inspired by Classical Conditioning**

Zhang, H., Zeng, H., Priimägi, A. & Ikkala, O., 2020, In : *Advanced Materials*. 9 p., 1906619.

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

**Wear and impact behaviour of High Velocity Air-Fuel sprayed Fe-Cr-Ni-B-C alloy coatings**

Bolelli, G., Milanti, A., Lusvarghi, L., Trombi, L., Koivuluoto, H. & Vuoristo, P., 2016, In : *Tribology International*. 95, p. 372-390

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., 2019, In : *Tribologia*. 36, 1, p. 54-57 4 p.

Research output: Contribution to journal › Article › Scientific

**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 HVOF spray processes**

Matikainen, V., Rubio Peregrina, S., Ojala, N., Koivuluoto, H., Schubert, J., Houdková & Vuoristo, P., 2019, In : *Tribologia*. 36, 1-2, p. 58-61 4 p.

Research output: Contribution to journal › Article › Scientific