

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 Cr₃C₂-25NiCr hardmetal coatings deposited by HVOF and HVAF 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

A comparison of five optical surface topography measurement methods

Mettänen, M. & Hirn, U., 1 Jan 2015, In : TAPPI Journal. 14, 1, p. 27-38 12 p.

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

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

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

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

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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

An Artificial Nocturnal Flower via Humidity-Gated Photoactuation in Liquid Crystal Networks

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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

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 scCO₂-induced patination and chemical passivation) hot-dip galvanized steel samples with SVET, FTIR, and SEM (EDS)

Saarimaa, V., Fuertes, N., Persson, D., Zavalis, T., Kaleva, A., Nikkanen, J-P., Levänen, E. & Heydari, G., 2020, In : Materials and Corrosion. 10 p.

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

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

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

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

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, 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

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

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

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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

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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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Cost optimal and nearly zero (nZEB) energy performance calculations for residential buildings with REHVA definition for nZEB national implementation

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Defined-size DNA triple crossover construct for molecular electronics: Modification, positioning and conductance properties

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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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Digital hydraulic multi-pressure actuator – the concept, simulation study and first experimental results

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

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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.

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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

Magliulo, M., Mallardi, A., Mulla, M. Y., Cotrone, S., Pistillo, B. R., Favia, P., Vikholm-Lundin, I., Palazzo, G. & Torsi, L., 11 Apr 2013, In : Advanced Materials. 25, 14, p. 2090-2094 5 p.

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

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Employing Knowledge on Causal Relationship to Assist Multidisciplinary Design Optimization

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Enhanced resonant nonlinear absorption and optical limiting in Er³⁺ 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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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

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Estimation of the largest expected photovoltaic power ramp rates

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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., Ginetet, 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 and numerical investigation of fretting fatigue behavior in bolted joints

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Experimental and numerical study of wall layer development in a tribocharged fluidized bed

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

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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FEM-based wear simulation for fretting contacts

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Fe₂O₃-TiO₂ Nano-heterostructure Photoanodes for Highly Efficient Solar Water Oxidation

Bañreca, 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 Er³⁺ oxyfluoride phosphate glasses and glass-ceramics

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

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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

Holmberg, K., Kivikytö-Reponen, P., Härkisaari, P., Valtonen, K. & Erdemir, A., 1 Nov 2017, In : Tribology International. 115, p. 116-139 24 p.

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

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High performance natural rubber composites with a hierarchical reinforcement structure of carbon nanotube modified natural fibers

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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.

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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.

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Impact wear and mechanical behavior of steels at subzero temperatures

Valtonen, K., Ratia, V., Ramakrishnan, K. R., Apostol, M., Terva, J. & Kuokkala, V-T., 2019, In : *Tribology International*. 129, p. 476-493 18 p.

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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.

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

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

Fedorik, F., Malaska, M., Hannila, R. & Haapala, A., 15 Nov 2015, In : Energy and Buildings. 107, p. 226-233 8 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Improving the toughness of thermally sprayed Cr₃C₂-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.

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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

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

Gao, Q., Linjama, M., Paloniitty, M. & Zhu, Y., 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

Käyräviivaiset koordinaattitot kontinuumimekaniikassa

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

Pekkanen, T. T., Timonen, R. S., Lendvay, G., Rissanen, M. P. & Eskola, A. J., 1 Jan 2019, In : PROCEEDINGS OF THE COMBUSTION INSTITUTE. 37, 1, p. 299-306 8 p.

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Kirigami-Based Light-Induced Shape-Morphing and Locomotion

Cheng, Y. C., Lu, H. C., Lee, X., Zeng, H. & Priimagi, A., 2019, In : Advanced Materials. 1906233.

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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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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 SrAl₂O₄: Eu, Dy, B containing glass

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Luminescence of Er³⁺ doped oxyfluoride phosphate glasses and glass-ceramics

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

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

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Normal displacements in non-Coulomb friction conditions during fretting

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Observation of Coexistence of Yu-Shiba-Rusinov States and Spin-Flip Excitations

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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

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Optical interference lithography using azobenzene-functionalized polymers for micro-and nanopatterning of silicon

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

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Pneumatic unidirectional cell stretching device for mechanobiological studies of cardiomyocytes

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Potential of renewable fuel to reduce diesel exhaust particle emissions

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Prediction of contact condition and surface damage by simulating variable friction coefficient and wear

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Redox-active, organometallic surface-relief gratings from azobenzene-containing polyferrocenylsilane block copolymers
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Running-in effects on friction of journal bearings under slow sliding speeds
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Second-Harmonic Generation from Metal Nanoparticles: Resonance Enhancement versus Particle Geometry
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Second-harmonic generation imaging of semiconductor nanowires with focused vector beams
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Self-alignment in the stacking of microchips with mist-induced water droplets
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Soft robotic gripper with compliant cell stacks for industrial part handling

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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

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Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within GaAs_{1-x}Bi_x/GaAs quantum wells

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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

Sautter, J. D., Xu, L., Miroshnichenko, A. E., Lysevych, M., Volkovskaya, I., Smirnova, D. A., Camacho-Morales, R., Zangeneh Kamali, K., Karouta, F., Vora, K., Tan, H. H., Kauranen, M., Staude, I., Jagadish, C., Neshev, D. N. & Rahmani, M., 12 Jun 2019, In : Nano Letters. 19, 6, p. 3905-3911 7 p.
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Techno-economic evaluation of integrating torrefaction with anaerobic digestion

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

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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

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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

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

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Toward the Atomically Abrupt Interfaces of SiO₂/Semiconductor Junctions

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Transfer printing of metallic microstructures on adhesion-promoting hydrogel substrates

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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 :
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Tribocorrosion behaviour of tin bronze CuSn12 under a sliding motion in NaCl containing environment: Contact to inert vs. reactive counterbody

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

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

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