

Lappalainen K, Wang GC, Kleissl J. **Estimation of the largest expected photovoltaic power ramp rates**. Applied Energy. 2020 Nov 15;278. 115636. <https://doi.org/10.1016/j.apenergy.2020.115636>

Huttunen-Saarivirta E, Kilpi L, Pasanen AT, Salminen T, Ronkainen H. **Tribocorrosion behaviour of tin bronze CuSn12 under a sliding motion in NaCl containing environment: Contact to inert vs. reactive counterbody**. Tribology International. 2020 Nov 1;151. 106389. <https://doi.org/10.1016/j.triboint.2020.106389>

Kivioja H, Vinha J. **Hot-box measurements to investigate the internal convection of highly insulated loose-fill insulation roof structures**. Energy and Buildings. 2020 Jun 1;216. 109934. <https://doi.org/10.1016/j.enbuild.2020.109934>

Ryynänen T, Mzezewa R, Meriläinen E, Hyvärinen T, Lekkala J, Narkilahti S et al. **Transparent microelectrode arrays fabricated by ion beam assisted deposition for neuronal cell in vitro recordings**. Micromachines. 2020 May 1;11(5). 497. <https://doi.org/10.3390/M11050497>

Shevkunov I, Katkovnik V, Claus D, Pedrini G, Petrov NV, Egiazarian K. **Hyperspectral phase imaging based on denoising in complex-valued eigensubspace**. Optics and Lasers in Engineering. 2020 Apr 1;127. 105973. <https://doi.org/10.1016/j.optlaseng.2019.105973>

Belardini A, Leahu G, Petronijevic E, Hakkarainen T, Koivusalo E, Piton MR et al. **Circular dichroism in the second harmonic field evidenced by asymmetric Au coated GaAs nanowires**. Micromachines. 2020 Feb 1;11(2):1-8. <https://doi.org/10.3390/mi11020225>

Schoeppner RL, Mohanty G, Polyakov MN, Petho L, Maeder X, Michler J. **An exploratory study on strengthening and thermal stability of magnetron sputtered W nanoparticles at the interface of Cu/Ni multilayer films**. Materials and Design. 2020;195. 108907. <https://doi.org/10.1016/j.matdes.2020.108907>

Saarimaa V, Fuertes N, Persson D, Zavalis T, Kaleva A, Nikkanen J-P et al. **Assessment of pitting corrosion in bare and passivated (wet scCO_2 -induced patination and chemical passivation) hot-dip galvanized steel samples with SVET, FTIR, and SEM (EDS)**. Materials and Corrosion. 2020. <https://doi.org/10.1002/maco.202011653>

Paunonen L, Seifert D. **Asymptotics and approximation of large systems of ordinary differential equations**. Systems and Control Letters. 2020;140. 104703. <https://doi.org/10.1016/j.sysconle.2020.104703>

Juoksukangas J, Hintikka J, Lehtovaara A, Mäntylä A, Vaara J, Frondelius T. **Avoiding the high friction peak in fretting contact**. Rakenteiden Mekaniikka. 2020;53(1):12-19. <https://doi.org/10.23998/rm.76266>

Olin M, Dal Maso M. **CFD modeling the diffusional losses of nanocluster-sized particles and condensing vapors in 90° bends of circular tubes**. Journal of Aerosol Science. 2020;150. 105618. <https://doi.org/10.1016/j.jaerosci.2020.105618>

Evans DM, Holstad TS, Mosberg AB, Småbråten DR, Vullum PE, Dadlani AL et al. **Conductivity control via minimally invasive anti-Frenkel defects in a functional oxide**. Nature Materials. 2020. <https://doi.org/10.1038/s41563-020-0765-x>

Di Vito D, Mosallaei M, Vahed BK, Kanerva M, Mäntysalo M. **Deformability analysis and improvement in stretchable electronics systems through finite element analysis**. In Carcaterra A, Graziani G, Paolone A, editors, Proceedings of XXIV AIMETA Conference 2019. Springer. 2020. p. 755-763. (Lecture Notes in Mechanical Engineering). https://doi.org/10.1007/978-3-030-41057-5_61

Mäntylä A, Juoksukangas J, Hintikka J, Frondelius T, Lehtovaara A. **FEM-based wear simulation for fretting contacts**. Rakenteiden Mekaniikka. 2020;53(1):20-27. <https://doi.org/10.23998/rm.76261>

Priimägi A, (ed.), Hecht S, (ed.). **From Responsive Molecules to Interactive Materials**. Advanced Materials. 2020;32(20). 2000215. <https://doi.org/10.1002/adma.202000215>

Singh AK, Ahonen A, Ghabcheloo R, Mueller A. **Introducing Multi-Convexity in Path Constrained Trajectory Optimization for Mobile Manipulators**. In European Control Conference 2020, ECC 2020. IEEE. 2020. p. 1178-1185

Holopainen S. **Käyräviivaiset koordinaatitot kontinuumimekaniikassa**. Rakenteiden Mekaniikka. 2020;53(2):53-66. <https://doi.org/10.23998/rm.83338>

Vitola V, Lahti V, Bite I, Spustaka A, Millers D, Lastusaari M et al. **Low temperature afterglow from SrAl₂O₄: Eu, Dy, B containing glass**. Scripta Materialia. 2020;190:86-90. <https://doi.org/10.1016/j.scriptamat.2020.08.023>

Lauri M, Pajarinen J, Peters J, Frintrop S. **Multi-sensor next-best-view planning as matroid-constrained submodular maximization**. IEEE Robotics and Automation Letters. 2020;5(4):5323-5330. <https://doi.org/10.1109/LRA.2020.3007445>

Nommeots-Nomm A, Houaoui A, Pradeepan Packiyannathar A, Chen X, Hokka M, Hill R et al. **Phosphate/oxyfluorophosphate glass crystallization and its impact on dissolution and cytotoxicity**. Materials Science and Engineering C. 2020;117. 111269. <https://doi.org/10.1016/j.msec.2020.111269>

Pajarinen J, Arenz O, Peters J, Neumann G. **Probabilistic approach to physical object disentangling**. IEEE Robotics and Automation Letters. 2020;5(4):5510-5517. <https://doi.org/10.1109/LRA.2020.3006789>

Gusrialdi A, Xu Y, Qu Z, Simaan MA. **Resilient Cooperative Voltage Control for Distribution Network with High Penetration Distributed Energy Resources**. In European Control Conference 2020, ECC 2020. IEEE. 2020. p. 1533-1539

Priimägi A, (ed.), Hecht S, (ed.). **Special Issue: From Responsive Materials to Interactive Materials**. Advanced Materials. 2020;32(20).

Chronopoulos A, Thorpe SD, Cortes E, Lachowski D, Rice AJ, Mykuliak VV et al. **Syndecan-4 tunes cell mechanics by activating the kindlin-integrin-RhoA pathway**. Nature Materials. 2020. <https://doi.org/10.1038/s41563-019-0567-1>

Zhang H, Zeng H, Priimägi A, Ikkala O. **Viewpoint: Pavlovian Materials—Functional Biomimetics Inspired by Classical Conditioning**. Advanced Materials. 2020. 1906619. <https://doi.org/10.1002/adma.201906619>

Santa-aho S, Laitinen A, Sorsa A, Vippola M. **Barkhausen Noise Probes and Modelling: A Review**. Journal of Nondestructive Evaluation. 2019 Dec 1;38(4). 94. <https://doi.org/10.1007/s10921-019-0636-z>

Pirjola L, Kuuluvainen H, Timonen H, Saarikoski S, Teinilä K, Salo L et al. **Potential of renewable fuel to reduce diesel exhaust particle emissions**. Applied Energy. 2019 Nov 15;254. 113636. <https://doi.org/10.1016/j.apenergy.2019.113636>

Mäntylä A, Hintikka J, Frondelius T, Vaara J, Lehtovaara A, Juoksukangas J. **Prediction of contact condition and surface damage by simulating variable friction coefficient and wear**. Tribology International. 2019 Nov 5. 106054. <https://doi.org/10.1016/j.triboint.2019.106054>

Mäenpää P, Aref MM, Mattila J. **FORMI: A Fast Holonomic Path Planning and Obstacle Representation Method Based on Interval Analysis**. In 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). <https://doi.org/10.1109/CIS-RAM47153.2019.9095822>

Motlagh HDK, Lotfi F, Taghirad HD, Germi SB. **Position Estimation for Drones based on Visual SLAM and IMU in GPS-denied Environment**. In ICRoM 2019 - 7th International Conference on Robotics and Mechatronics. IEEE. 2019. p. 120-124 <https://doi.org/10.1109/ICRoM48714.2019.9071826>

Hintikka J, Mäntylä A, Vaara J, Frondelius T, Juoksukangas J, Lehtovaara A. **Running-in in fretting, transition from near-stable friction regime to gross sliding.** Tribology International. 2019 Nov;143: 106073. <https://doi.org/10.1016/j.triboint.2019.106073>

Mäntyranta A, Heino V, Isotahdon E, Salminen T, Huttunen-Saarivirta E. **Tribocorrosion behaviour of two low-alloy steel grades in simulated waste solution.** Tribology International. 2019 Oct 1;138:250-262. <https://doi.org/10.1016/j.triboint.2019.05.032>

Perttula A, Nguyen N, Collin J, Jokinen J-P. **Vehicle type detection and passenger satisfaction analysis using smartphone sensors and digital surveys.** IET Intelligent Transport Systems. 2019 Oct 1;13(10):1499-1506. <https://doi.org/10.1049/iet-its.2018.5349>

Reshef O, Saad-Bin-Alam M, Huttunen MJ, Carlow G, Sullivan BT, Ménard JM et al. **Multiresonant High-Q Plasmonic Metasurfaces.** Nano Letters. 2019 Sep 11;19(9):6429-6434. <https://doi.org/10.1021/acs.nanolett.9b02638>

Ylönen M, Franc JP, Miettinen J, Saarenrinne P, Fivel M. **Shedding frequency in cavitation erosion evolution tracking.** International Journal of Multiphase Flow. 2019 Sep 1;118:141-149. <https://doi.org/10.1016/j.ijmultiphaseflow.2019.06.009>

Lehmusto J, Olin M, Viljanen J, Kalliokoski J, Mylläri F, Toivonen J et al. **Detection of gaseous species during KCl-induced high-temperature corrosion by the means of CPFAAS and CI-API-TOF.** Materials and Corrosion. 2019 Aug 30. <https://doi.org/10.1002/maco.201910964>

Kreutzer J, Viehrig M, Pölönen RP, Zhao F, Ojala M, Aalto-Setälä K et al. **Pneumatic unidirectional cell stretching device for mechanobiological studies of cardiomyocytes.** BIOMECHANICS AND MODELING IN MECHANOBIOLOGY. 2019 Aug 23. <https://doi.org/10.1007/s10237-019-01211-8>

Thomas K, Mohanty G, Wehrs J, Taylor AA, Pathak S, Casari D et al. **Elevated and cryogenic temperature micropillar compression of magnesium–niobium multilayer films.** Journal of Materials Science. 2019 Aug 15;54(15):10884-10901. <https://doi.org/10.1007/s10853-019-03422-x>

Szczodra A, Mardoukhi A, Hokka M, Boetti NG, Petit L. **Fluorine losses in Er³⁺ oxyfluoride phosphate glasses and glass-ceramics.** Journal of Alloys and Compounds. 2019 Aug 15;797:797-803. <https://doi.org/10.1016/j.jallcom.2019.05.151>

Kezilebieke S, Žitko R, Dvorak M, Ojanen T, Liljeroth P. **Observation of Coexistence of Yu-Shiba-Rusinov States and Spin-Flip Excitations.** Nano Letters. 2019 Jul 10;19(7):4614-4619. <https://doi.org/10.1021/acs.nanolett.9b01583>

Juoksukangas J, Nurmi V, Hintikka J, Vippola M, Lehtovaara A, Mäntylä A et al. **Characterization of cracks formed in large flat-on-flat fretting contact.** International Journal of Fatigue. 2019 Jul;124:361-370. <https://doi.org/10.1016/j.ijfatigue.2019.03.004>

Sautter JD, Xu L, Miroshnichenko AE, Lysevych M, Volkovskaya I, Smirnova DA et al. **Tailoring Second-Harmonic Emission from (111)-GaAs Nanoantennas.** Nano Letters. 2019 Jun 12;19(6):3905-3911. <https://doi.org/10.1021/acs.nanolett.9b01112>

Vuornos K, Ojansivu M, Koivisto JT, Häkkänen H, Belay B, Montonen T et al. **Bioactive glass ions induce efficient osteogenic differentiation of human adipose stem cells encapsulated in gellan gum and collagen type I hydrogels.** Materials Science and Engineering C. 2019 Jun 1;99:905-918. <https://doi.org/10.1016/j.msec.2019.02.035>

Koivikko A, Sariola V. **Fabrication of soft devices with buried fluid channels by using sacrificial 3D printed molds.** In 2019 2nd IEEE International Conference on Soft Robotics (RoboSoft). IEEE. 2019. p. 509-513 <https://doi.org/10.1109/ROBOSOFT.2019.8722741>

Sanchez-Guevara C, Núñez Peiró M, Taylor J, Mavrogianni A, Neila González J. **Assessing population vulnerability towards summer energy poverty: Case studies of Madrid and London.** Energy and Buildings. 2019 May 1;190:132-143. <https://doi.org/10.1016/j.enbuild.2019.02.024>

Rossi M, Liegmann E, Karamanakos P, Castelli-Dezza F, Kennel R. **Direct model predictive power control of a series-connected modular rectifier**. In PRECEDE 2019: 2019 IEEE International Symposium on Predictive Control of Electrical Drives and Power Electronics. IEEE. 2019. p. 1-6 <https://doi.org/10.1109/PRECEDE.2019.8753318>

Wendel S, Karamanakos P, Dietz A, Kennel R. **Operating point dependent variable switching point predictive current control for PMSM drives**. In PRECEDE 2019: 2019 IEEE International Symposium on Predictive Control of Electrical Drives and Power Electronics. IEEE. 2019. p. 1-6 <https://doi.org/10.1109/PRECEDE.2019.8753362>

Itävuo P, Hulthén E, Yahyaei M, Vilkkö M. **Mass balance control of crushing circuits**. Minerals Engineering. 2019 May;135:37-47. <https://doi.org/10.1016/j.mineng.2019.02.033>

Wu D, Coatanea E, Wang GG. **Employing Knowledge on Causal Relationship to Assist Multidisciplinary Design Optimization**. Journal of Mechanical Design, Transactions of the ASME. 2019 Apr;141(4). 041402. <https://doi.org/10.1115/1.4042342>

Backas J, Ghabcheloo R. **Nonlinear model predictive energy management of hydrostatic drive transmissions**. Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering. 2019 Mar 1;233(3):335-347. <https://doi.org/10.1177/0959651818793454>

Hintikka J, Mäntylä A, Vaara J, Frondelius T, Lehtovaara A. **Stable and unstable friction in fretting contacts**. Tribology International. 2019 Mar 1;131:73-82. <https://doi.org/10.1016/j.triboint.2018.10.014>

Nurmi V, Hintikka J, Juoksukangas J, Honkanen M, Vippola M, Lehtovaara A et al. **The formation and characterization of fretting-induced degradation layers using quenched and tempered steel**. Tribology International. 2019 Mar 1;131:258-267. <https://doi.org/10.1016/j.triboint.2018.09.012>

Liimatainen H, van Vliet O, Aplyn D. **The potential of electric trucks – An international commodity-level analysis**. Applied Energy. 2019 Feb 15;236:804-814. <https://doi.org/10.1016/j.apenergy.2018.12.017>

Claude S, Ginestet S, Bonhomme M, Escadeillas G, Taylor J, Marincioni V et al. **Evaluating retrofit options in a historical city center: Relevance of bio-based insulation and the need to consider complex urban form in decision-making**. Energy and Buildings. 2019 Jan 1;182:196-204. <https://doi.org/10.1016/j.enbuild.2018.10.026>

Pekkanen TT, Timonen RS, Lendvay G, Rissanen MP, Eskola AJ. **Kinetics and thermochemistry of the reaction of 3-methylpropargyl radical with molecular oxygen**. PROCEEDINGS OF THE COMBUSTION INSTITUTE. 2019 Jan 1;37(1):299-306. <https://doi.org/10.1016/j.proci.2018.05.050>

Wani OM, Verpaalen R, Zeng H, Priimagi A, Schenning APHJ. **An Artificial Nocturnal Flower via Humidity-Gated Photoactuation in Liquid Crystal Networks**. Advanced Materials. 2019 Jan;31(2). 1805985. <https://doi.org/10.1002/adma.201805985>

Jaurola M, Hedin A, Tikkanen S, Huhtala K. **A TOpti simulation for finding fuel saving by optimising propulsion control and power management**. Journal of Marine Science and Technology (Japan). 2019. <https://doi.org/10.1007/s00773-019-00651-2>

Huttunen-Saarivirta E, Isotahdon E, Metsäjoki J, Salminen T, Ronkainen H, Carpén L. **Behaviour of leaded tin bronze in simulated seawater in the absence and presence of tribological contact with alumina counterbody: Corrosion, wear and tribocorrosion**. Tribology International. 2019;129:257-271. <https://doi.org/10.1016/j.triboint.2018.08.021>

Välikangas T, Hærvig J, Kuuluvainen H, Dal Maso M, Peltonen P, Vuorinen V. **Deposition of dry particles on a fin-and-tube heat exchanger by a coupled soft-sphere DEM and CFD**. International Journal of Heat and Mass Transfer. 2019. 119046. <https://doi.org/10.1016/j.ijheatmasstransfer.2019.119046>

Cao X, Aref MM, Mattila J. **Design and Control of a Flexible Joint as a Hydraulic Series Elastic Actuator for Manipulation Applications**. In 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). <https://doi.org/10.1109/CIS-RAM47153.2019.9095773>

Houaoui A, Lyyra I, Agniel R, Pauthe E, Massera J, Boissière M. **Dissolution, bioactivity and osteogenic properties of composites based on polymer and silicate or borosilicate bioactive glass**. Materials Science and Engineering C. 2019;107. 110340. <https://doi.org/10.1016/j.msec.2019.110340>

Haiko O, Heino V, Porter DA, Uusitalo J, Kömi J. **Effect of microstructure on the abrasive wear resistance of steels with hardness 450 HV**. Tribologia. 2019;36(1):54-57. <https://doi.org/10.30678/FJT.82443>

Suokas E. **Effect of polyolefin molecular structure on product properties in extrusion coating**. In 17th Biennial TAPPI European PLACE Conference 2019. TAPPI Press. 2019. p. 89-98

Anonen T, Hanski J, Hyvärinen M, Kortelainen H, Uusitalo T, Vainio H et al. **Enablers and barriers of smart data-based asset management services in industrial business networks**. In Lecture Notes in Mechanical Engineering. Pleiades Publishing. 2019. p. 51-60. (Lecture Notes in Mechanical Engineering). https://doi.org/10.1007/978-3-319-95711-1_6

Valtonen K, Ratia V, Ramakrishnan KR, Apostol M, Terva J, Kuokkala V-T. **Impact wear and mechanical behavior of steels at subzero temperatures**. Tribology International. 2019;129:476-493. <https://doi.org/10.1016/j.triboint.2018.08.016>

Gao Q, Linjama M, Paloniitty M, Zhu Y. **Investigation on positioning control strategy and switching optimization of an equal coded digital valve system**. Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering. 2019. <https://doi.org/10.1177/0959651819884749>

Cheng YC, Lu HC, Lee X, Zeng H, Priimagi A. **Kirigami-Based Light-Induced Shape-Morphing and Locomotion**. Advanced Materials. 2019. 1906233. <https://doi.org/10.1002/adma.201906233>

Lahti J. **Market implementation of active and intelligent packaging-opportunities from a socio-economic perspective**. In 17th Biennial TAPPI European PLACE Conference 2019. TAPPI Press. 2019. p. 419-427

Liikanen H, Aref MM, Mattila J. **M-Estimator Application in Real-Time Sensor Fusion for Smooth Position Feedback of Heavy-Duty Field Robots**. In 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). <https://doi.org/10.1109/CIS-RAM47153.2019.9095821>

Lahti J. **Nanocellulose and Polylactic Acid Based Multilayer Coatings for Barrier Applications**. In 17th Biennial TAPPI European PLACE Conference 2019. TAPPI Press. 2019. p. 446-455

Alanen J, Ruiz Morales E, Muhammad A, Saarinen H, Minkkinen J. **Remote diagnostics application software for remote handling equipment**. Fusion Engineering and Design. 2019. <https://doi.org/10.1016/j.fusengdes.2019.01.125>

Linjamaa A, Lehtovaara A, Kallio M, Léger A. **Running-in effects on friction of journal bearings under slow sliding speeds**. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology. 2019. <https://doi.org/10.1177/1350650119864758>

Matikainen V, Rubio Peregrina S, Ojala N, Koivuluoto H, Schubert J, Houdková et al. **Slurry and dry particle erosion wear properties of WC-10Co4Cr and Cr₃C₂-25NiCr hardmetal coatings deposited by HVOF and HVOF spray processes**. Tribologia. 2019;36(1-2):58-61. <https://doi.org/10.30678/FJT.83590>

Lemouгна PN, Yliniemi J, Ismailov A, Levänen E, Tanskanen P, Kinnunen P et al. **Spodumene tailings for porcelain and structural materials: Effect of temperature (1050–1200°C) on the sintering and properties**. Minerals Engineering. 2019. 105843. <https://doi.org/10.1016/j.mineng.2019.105843>

Linjama M. **Variable speed digital hydraulic transformer-based servo drive**. Proceedings of the Institution of Mechanical Engineers. Part I: Journal of Systems and Control Engineering. 2019. <https://doi.org/10.1177/0959651819869145>

Linjama M. **Variable speed drive with hydraulic boost**. International Journal of Fluid Power. 2019;20(1):99-123. <https://doi.org/10.13052/ijfp1439-9776.2014>

Czaplicki R, Kiviniemi A, Huttunen MJ, Zang X, Stolt T, Vartiainen I et al. **Less Is More: Enhancement of Second-Harmonic Generation from Metasurfaces by Reduced Nanoparticle Density**. Nano Letters. 2018 Dec 12;18(12):7709-7714. <https://doi.org/10.1021/acs.nanolett.8b03378>

Ottosen NS, Ristinmaa M, Kouhia R. **Enhanced multiaxial fatigue criterion that considers stress gradient effects**. International Journal of Fatigue. 2018 Nov 1;116:128-139. <https://doi.org/10.1016/j.ijfatigue.2018.05.024>

Far MF, Mustafa B, Martin F, Rasilo P, Belahcen A. **Flux-Weakening Control for IPMSM Employing Model Order Reduction**. In 2018 23rd International Conference on Electrical Machines, ICEM 2018. IEEE. 2018. p. 1510-1516 <https://doi.org/10.1109/ICELMACH.2018.8506693>

Far MF, Mukherjee V, Martin F, Rasilo P, Belahcen A. **Model Order Reduction of Bearingless Reluctance Motor Including Eccentricity**. In 2018 23rd International Conference on Electrical Machines, ICEM 2018. IEEE. 2018. p. 2243-2249 <https://doi.org/10.1109/ICELMACH.2018.8506758>

Niemelä-Anttonen H, Koivuluoto H, Tuominen M, Teisala H, Juuti P, Haapanen J et al. **Icephobicity of Slippery Liquid Infused Porous Surfaces under Multiple Freeze–Thaw and Ice Accretion–Detachment Cycles**. Advanced Materials Interfaces. 2018 Oct;5(20). <https://doi.org/10.1002/admi.201800828>

Šutka A, Käämbre T, Joost U, Kooser K, Kook M, Duarte RF et al. **Solvothermal synthesis derived Co-Ga codoped ZnO diluted magnetic degenerated semiconductor nanocrystals**. Journal of Alloys and Compounds. 2018 Sep 30;763:164-172. <https://doi.org/10.1016/j.jallcom.2018.05.036>

Mäkinen P, Mononen T, Mattila J. **Inertial Sensor-Based State Estimation of Flexible Links Subject to Bending and Torsion**. In 2018 14th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, MESA 2018. IEEE. 2018. 8449188 <https://doi.org/10.1109/MESA.2018.8449188>

Teke B, Lanz M, Kämäräinen J-K, Hietanen A. **Real-time and Robust Collaborative Robot Motion Control with Microsoft Kinect @ v2**. In 2018 14th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, MESA 2018. IEEE. 2018. 8449156 <https://doi.org/10.1109/MESA.2018.8449156>

Mahmoodpour M, Lobov A, Lanz M, Mäkelä P, Rundas N. **Role-based visualization of industrial IoT-based systems**. In 2018 14th IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications, MESA 2018. IEEE. 2018. 8449183 <https://doi.org/10.1109/MESA.2018.8449183>

Sippola P, Kolehmainen J, Ozel A, Liu X, Saarenrinne P, Sundaresan S. **Experimental and numerical study of wall layer development in a tribocharged fluidized bed**. Journal of Fluid Mechanics. 2018 Aug 25;849:860-884. <https://doi.org/10.1017/jfm.2018.412>

Ghabcheloo R, Siddiqui S. **Complete Odometry Estimation of a Vehicle Using Single Automotive Radar and a Gyroscope**. In MED 2018 - 26th Mediterranean Conference on Control and Automation. IEEE. 2018. p. 855-860. 8442474 <https://doi.org/10.1109/MED.2018.8442474>

Sajna MS, Perumbilavil S, Prakashan VP, Sanu MS, Joseph C, Biju PR et al. **Enhanced resonant nonlinear absorption and optical limiting in Er³⁺ ions doped multicomponent tellurite glasses**. *Materials Research Bulletin*. 2018 Aug 1;104:227-235. <https://doi.org/10.1016/j.materresbull.2018.04.026>

Roldán Del Cerro P, Salminen T, Lastusaari M, Petit L. **Persistent luminescent borosilicate glasses using direct particles doping method**. *Scripta Materialia*. 2018 Jul 1;151:38-41. <https://doi.org/10.1016/j.scriptamat.2018.03.034>

Nommeots-Nomm A, Boetti NG, Salminen T, Massera J, Hokka M, Petit L. **Luminescence of Er³⁺ doped oxyfluoride phosphate glasses and glass-ceramics**. *Journal of Alloys and Compounds*. 2018 Jun 30;751:224-230. <https://doi.org/10.1016/j.jallcom.2018.04.101>

Javaheri V, Nyysönen T, Grande B, Porter D. **Computational design of a novel medium-carbon, low-alloy steel microalloyed with niobium**. *Journal of Materials Engineering and Performance*. 2018 Jun;27(6):2978-2992. <https://doi.org/10.1007/s11665-018-3376-9>

Oluoti K, Doddapaneni TRKC, Richards T. **Investigating the kinetics and biofuel properties of *Alstonia congensis* and *Ceiba pentandra* via torrefaction**. *Energy*. 2018 May 1;150:134-141. <https://doi.org/10.1016/j.energy.2018.02.086>

Koivusalo L, Karvinen J, Sorsa E, Jönkkäri I, Väliäho J, Kallio P et al. **Hydrazone crosslinked hyaluronan-based hydrogels for therapeutic delivery of adipose stem cells to treat corneal defects**. *Materials Science and Engineering C*. 2018 Apr;85:68-78. <https://doi.org/10.1016/j.msec.2017.12.013>

Mohammed WM, Ramis Ferrer B, Iarovyi S, Negri E, Fumagalli L, Lobov A et al. **Generic platform for manufacturing execution system functions in knowledge-driven manufacturing systems**. *International Journal of Computer Integrated Manufacturing*. 2018 Mar 4;1-13. <https://doi.org/10.1080/0951192X.2017.1407874>

Krogerus T, Hyvönen M, Huhtala K. **Analysis of common rail pressure signal of dual-fuel large industrial engine for identification of injection duration of pilot diesel injectors**. *Fuel*. 2018 Mar;216:1-9. <https://doi.org/10.1016/j.fuel.2017.11.152>

Välikangas T, Karvinen R. **Conjugated Heat Transfer Simulation of a Fin-and-Tube Heat Exchanger**. *Heat Transfer Engineering*. 2018;39(13-14):1192-1200. <https://doi.org/10.1080/01457632.2017.1363628>

Soltani A, Curtze S, Lahti J, Järvelä K, Laurikka J, Hokka M et al. **Digital image correlation study of the deformation and functioning of the human heart during open-heart surgery**. In *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). https://doi.org/10.1007/978-3-319-63552-1_4

Vazquez Fernandez N, Isakov M, Hokka M, Kuokkala VT. **Effects of adiabatic heating estimated from tensile tests with continuous heating**. In *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). https://doi.org/10.1007/978-3-319-62956-8_1

Vuorinen E, Heino V, Ojala N, Haiko O, Hedayati A. **Erosive-abrasive wear behavior of carbide-free bainitic and boron steels compared in simulated field conditions**. *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology*. 2018;232(1):3-13. <https://doi.org/10.1177/1350650117739125>

Välikangas T, Singh S, Sørensen K, Condra T. **Fin-and-tube heat exchanger enhancement with a combined herringbone and vortex generator design**. *International Journal of Heat and Mass Transfer*. 2018;118:602-616. <https://doi.org/10.1016/j.ijheatmasstransfer.2017.11.006>

Coatanéa E, Wu D, Tsarkov V, Gary Wang G, Modi S, Jafarian H. **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**. In *38th Computers and Information in Engineering Conference*. Vol. 1B-2018. The American Society of Mechanical Engineers ASME. 2018 <https://doi.org/10.1115/DETC201885895>

Zeng H, Wasylczyk P, Wiersma DS, Priimagi A. **Light Robots: Bridging the Gap between Microrobotics and Photomechanics in Soft Materials**. *Advanced Materials*. 2018;30(24). 1703554. <https://doi.org/10.1002/adma.201703554>

Doddapaneni TRKC, Praveenkumar R, Tolvanen H, Rintala J, Konttinen J. **Techno-economic evaluation of integrating torrefaction with anaerobic digestion**. *Applied Energy*. 2018;213:272-284. <https://doi.org/10.1016/j.apenergy.2018.01.045>

Jaurola M, Hedin A, Tikkanen S, Huhtala K. **TOpti: a flexible framework for optimising energy management for various ship machinery topologies**. *Journal of Marine Science and Technology (Japan)*. 2018. <https://doi.org/10.1007/s00773-018-0617-4>

Teisala H, Geyer F, Haapanen J, Juuti P, Mäkelä JM, Vollmer D et al. **Ultrafast Processing of Hierarchical Nanotexture for a Transparent Superamphiphobic Coating with Extremely Low Roll-Off Angle and High Impalement Pressure**. *Advanced Materials*. 2018;30(14). 1706529. <https://doi.org/10.1002/adma.201706529>

Pyrhönen V-P, Koivisto H, Vilkkio M. **A Reduced-Order Two-Degree-of-Freedom Composite Nonlinear Feedback Control for a Rotary DC Servo Motor**. In *Proceedings of the 56th IEEE Conference on Decision and Control*. Melbourne, Australia. 2017. p. 2065-2071 <https://doi.org/10.1109/CDC.2017.8263951>

Holmberg K, Kivikytö-Reponen P, Härkisaari P, Valtonen K, Erdemir A. **Global energy consumption due to friction and wear in the mining industry**. *Tribology International*. 2017 Nov 1;115:116-139. <https://doi.org/10.1016/j.triboint.2017.05.010>

Layek RK, Uddin ME, Kim NH, Tak Lau AK, Lee JH. **Noncovalent functionalization of reduced graphene oxide with pluronic F127 and its nanocomposites with gum arabic**. *Composites Part B : Engineering*. 2017 Nov 1;128:155-163. <https://doi.org/10.1016/j.compositesb.2017.07.010>

Heininen A, Aaltonen J, Koskinen KT. **Simulating the Drag Coefficient of a Spherical Autonomous Underwater Vehicle**. In Aaltonen J, Virkkunen R, Koskinen KT, Kuivanen R, editors, *Proceedings of the 2nd Annual SMACC Research Seminar 2017*. Vol. 2. Tampere: Tampere University of Technology. 2017. p. 53-56. 14

Boardman AD, Alberucci A, Assanto G, Grimalsky VV, Kibler B, McNiff J et al. **Waves in hyperbolic and double negative metamaterials including rogues and solitons**. *Nanotechnology*. 2017 Oct 9;28(44). 444001. <https://doi.org/10.1088/1361-6528/aa6792>

Koivumäki J, Mattila J. **Adaptive and nonlinear control of discharge pressure for variable displacement axial piston pumps**. *Journal of Dynamic Systems, Measurement and Control: Transactions of the ASME*. 2017 Oct 1;139(10). 101008. <https://doi.org/10.1115/1.4036537>

Itävuori P, Hulthén E, Vilkkio M. **Feed-hopper level estimation and control in cone crushers**. *Minerals Engineering*. 2017 Aug 15;110:82-95. <https://doi.org/10.1016/j.mineng.2017.04.010>

Palagi S, Mark AG, Melde K, Qiu T, Zeng H, Parmeggiani C et al. **Locomotion of light-driven soft microrobots through a hydrogel via local melting**. In *International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017 - Proceedings*. IEEE. 2017 <https://doi.org/10.1109/MARSS.2017.8001916>

Kreutzer J, Viehrig M, Maki A-J, Kallio P, Rahikainen R, Hytönen V. **Pneumatically actuated elastomeric device for simultaneous mechanobiological studies & live-cell fluorescent microscopy**. In *International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017 - Proceedings*. IEEE. 2017 <https://doi.org/10.1109/MARSS.2017.8001929>

Laurila MM, Khorramdel B, Dastpak A, Mäntysalo M. **Statistical analysis of E-jet print parameter effects on Ag-nanoparticle ink droplet size**. *Journal of Micromechanics and Microengineering*. 2017 Aug 2;27(9). 095005. <https://doi.org/10.1088/1361-6439/aa7a71>

Antin KN, Pärnänen T. **Democratizing composites manufacturing -inexpensive tooling empowers new players**. SAMPE Journal. 2017 Jul 1;53(4):6-10.

Kivelä T, Mattila J, Puura J, Launis S. **Redundant robotic manipulator path planning for real-time obstacle and self-collision avoidance**. In Ferraresi C, Quaglia G, editors, Advances in Service and Industrial Robotics: Proceedings of the 26th International Conference on Robotics in Alpe-Adria-Danube Region, RAAD 2017. Springer International Publishing. 2017. p. 208-216. (Mechanisms and Machine Science). https://doi.org/10.1007/978-3-319-61276-8_24

Stoykova E, Berberova N, Kim Y, Nazarova D, Ivanov B, Gotchev A et al. **Dynamic speckle analysis with smoothed intensity-based activity maps**. Optics and Lasers in Engineering. 2017 Jun 1;93:55-65. <https://doi.org/10.1016/j.optlaseng.2017.01.012>

Laakkonen P, Quadrat A. **A fractional representation approach to the robust regulation problem for SISO systems**. Systems and Control Letters. 2017 May 1;103:32-37. <https://doi.org/10.1016/j.sysconle.2017.02.006>

Lanz M, Tuokko R. **Concepts, methods and tools for individualized production**. PRODUCTION ENGINEERING. 2017 Apr 1;11(2):205-212. <https://doi.org/10.1007/s11740-017-0728-5>

Sekki T, Airaksinen M, Saari A. **Effect of energy measures on the values of energy efficiency indicators in Finnish daycare and school buildings**. Energy and Buildings. 2017 Mar 15;139:124-132. <https://doi.org/10.1016/j.enbuild.2017.01.005>

Mashayekhi M, Winchester L, Laurila M-M, Mäntysalo M, Ogier S, Terés L et al. **Chip-by-chip configurable interconnection using digital printing techniques**. Journal of Micromechanics and Microengineering. 2017 Mar 6;27(4). 045009. <https://doi.org/10.1088/1361-6439/aa5ef3>

Seidt JD, Kuokkala V-T, Smith JL, Gilat A. **Synchronous Full-Field Strain and Temperature Measurement in Tensile Tests at Low, Intermediate and High Strain Rates**. Experimental Mechanics. 2017 Feb;57(2):219–229. <https://doi.org/10.1007/s11340-016-0237-z>

Suokas E. **Effect of air gap on the adhesion of PET layer on cardboard substrate in extrusion coating**. In 16th TAPPI European PLACE Conference 2017. TAPPI Press. 2017. p. 529-544

Lahti J, Kampuri T, Kuusipalo J. **Novel bio-based materials for active and intelligent packaging**. In 16th TAPPI European PLACE Conference 2017. TAPPI Press. 2017

Lahti J, Kuusipalo J, Auvinen S. **Novel equipment to simulate hot air heat sealability of packaging materials**. In 16th TAPPI European PLACE Conference 2017. TAPPI Press. 2017. p. 237-248

Kuusipalo J, Lahti J. **Tampere University of Technology, laboratory of materials science, paper converting and packaging technology Tampere, Finland**. In 16th TAPPI European PLACE Conference 2017: Basel; Switzerland; 22 May 2017 through 24 May 2017. Vol. May-2017. TAPPI Press. 2017

Isotahdon E, Huttunen-Saarivirta E, Kuokkala V. **Characterization of the microstructure and corrosion performance of Ce-alloyed Nd-Fe-B magnets**. Journal of Alloys and Compounds. 2017 Jan;692:190-197. <https://doi.org/10.1016/j.jallcom.2016.09.058>

Huova M, Aalto A, Linjama M, Huhtala K, Lantela T, Pietola M. **Digital hydraulic multi-pressure actuator – the concept, simulation study and first experimental results**. International Journal of Fluid Power. 2017;18(3):141-152. <https://doi.org/10.1080/14399776.2017.1302775>

Wu D, Coatanea E, Wang GG. **Dimension reduction and decomposition using causal graph and qualitative analysis for aircraft concept design optimization**. In 43rd Design Automation Conference. The American Society of Mechanical Engineers ASME. 2017 <https://doi.org/10.1115/DETC201767601>

Wang X, Fagerlund S, Massera J, Södergård B, Hupa L. **Do properties of bioactive glasses exhibit mixed alkali behavior?** Journal of Materials Science. 2017;52(15):8986–8997. <https://doi.org/10.1007/s10853-017-0915-y>

Haiko O, Miettunen I, Porter D, Ojala N, Ratia V, Heino V et al. **Effect of finish rolling and quench stop temperatures on impact-abrasive wear resistance of 0.35 % carbon direct-quenched steel.** Tribologia. 2017;35(1-2):5-21.

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

Lindroos M, Laukkanen A, Cailletaud G, Kuokkala V-T. **On the effect of deformation twinning and microstructure to strain hardening of high manganese austenitic steel 3D microstructure aggregates at large strains.** International Journal of Solids and Structures. 2017;125:68-76. <https://doi.org/10.1016/j.ijsolstr.2017.07.015>

Taddeo R, Prajapati S, Lepistö R. **Optimizing ammonium adsorption on natural zeolite for wastewaters with high loads of ammonium and solids.** Journal of Porous Materials. 2017;24(6):1545–1554. <https://doi.org/10.1007/s10934-017-0394-1>

Koivuluoto H, Milanti A, Bolelli G, Latokartano J, Marra F, Pulci G et al. **Structures and properties of laser-assisted cold-sprayed aluminum coatings.** In THERMEC 2016. Vol. 879. Trans Tech Publications Ltd. 2017. p. 984-989. (Materials Science Forum). <https://doi.org/10.4028/www.scientific.net/MSF.879.984>

Mishra A, Petit L, Pihl M, Andersson M, Salminen T, Rocherullé J et al. **Thermal, structural and in vitro dissolution of antimicrobial copper-doped and slow resorbable iron-doped phosphate glasses.** Journal of Materials Science. 2017;52(15):8957–8972. <https://doi.org/10.1007/s10853-017-0805-3>

Hintikka J, Lehtovaara A, Mäntylä A. **Third Particle Ejection Effects on Wear with Quenched and Tempered Steel Fretting Contact.** TRIBOLOGY TRANSACTIONS. 2017;60(1):70-78. <https://doi.org/10.1080/10402004.2016.1146813>

Barreca D, Carraro G, Gasparotto A, Maccato C, Altantzis T, Sada C et al. **Vapor Phase Fabrication of Nanoheterostructures Based on ZnO for Photoelectrochemical Water Splitting.** Advanced Materials Interfaces. 2017;4(18). 1700161. <https://doi.org/10.1002/admi.201700161>

Carfora D, Gironimo GD, Esposito G, Huhtala K, Määttä T, Mäkinen H et al. **Multicriteria selection in concept design of a divertor remote maintenance port in the EU DEMO reactor using an AHP participative approach.** Fusion Engineering and Design. 2016 Nov 15;112:324-331. <https://doi.org/10.1016/j.fusengdes.2016.08.023>

Juoksukangas J, Lehtovaara A, Mäntylä A. **Experimental and numerical investigation of fretting fatigue behavior in bolted joints.** Tribology International. 2016 Nov 1;103:440-448. <https://doi.org/10.1016/j.triboint.2016.07.021>

Järvinen H, Isakov M, Nyssönen T, Järvenpää M, Peura P. **The effect of initial microstructure on the final properties of press hardened 22MnB5 steels.** Materials Science and Engineering A: Structural Materials Properties Microstructure and Processing. 2016 Oct 31;676:109-120. <https://doi.org/10.1016/j.msea.2016.08.096>

Juoksukangas J, Lehtovaara A, Mäntylä A. **A comparison of relative displacement fields between numerical predictions and experimental results in fretting contact.** Proceedings of the institution of Mechanical Engineers Part J: Journal of Engineering Tribology. 2016 Oct 1;230(10):1273-1287. <https://doi.org/10.1177/1350650116633573>

Sekki T, Andelin M, Airaksinen M, Saari A. **Consideration of energy consumption, energy costs, and space occupancy in Finnish daycare centres and school buildings.** Energy and Buildings. 2016 Oct 1;129:199-206. <https://doi.org/10.1016/j.enbuild.2016.08.015>

Mikkonen A, Karvinen R. **Solar Panel Breakage During Heavy Rain Caused by Thermal Stress.** In Engineered Transparency 2016: Glass in Architecture and Structural Engineering. Wiley. 2016

Lindgren M, Santa-aho S, Vippola M. **Barkhausen noise response of three different welded duplex stainless steels.** Insight . 2016 Sep 1;58(9):480-486. <https://doi.org/10.1784/insi.2016.58.9.480>

Ellman A, Wendrich R, Tiainen T. **Framework and feasibility study for pairwise comparison tool.** In Proceedings of the ASME 2016 Computers and Information in Engineering Conference IDETC/CIE 2016. Charlotte, North Carolina: ASME. 2016. DETC2016-59886 <https://doi.org/10.1115/DETC2016-59886>

Luna E, Wu M, Hanke M, Puustinen J, Guina M, Trampert A. **Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within GaAs_{1-x}Bi_x/GaAs quantum wells.** Nanotechnology. 2016 Jul 1;27(32). 325603. <https://doi.org/10.1088/0957-4484/27/32/325603>

Rodríguez Ripoll M, Ojala N, Katsich C, Totolin V, Tomastik C, Hradil K. **The role of niobium in improving toughness and corrosion resistance of high speed steel laser hardfacings.** Materials and Design. 2016 Jun 5;99:509-520. <https://doi.org/10.1016/j.matdes.2016.03.081>

Philippi PC, Siebert DN, Hegele LA, Mattila KK. **High-order lattice-Boltzmann.** Journal of the Brazilian Society of Mechanical Sciences and Engineering. 2016 Jun 1;38(5):1401-1419. <https://doi.org/10.1007/s40430-015-0441-2>

Kuzmin M, Laukkanen P, Mäkelä J, Yasir M, Tuominen M, Dahl J et al. **Toward the Atomically Abrupt Interfaces of SiO_x/Semiconductor Junctions.** Advanced Materials Interfaces. 2016 Jun;3(11). 1500510. <https://doi.org/10.1002/admi.201500510>

Janka L, Norpoth J, Eicher S, Rodríguez Ripoll M, Vuoristo P. **Improving the toughness of thermally sprayed Cr₃C₂-NiCr hardmetal coatings by laser post-treatment.** Materials and Design. 2016 May 15;98:135-142. <https://doi.org/10.1016/j.matdes.2016.03.007>

Hokka M, Black J, Tkalich D, Fourmeau M, Kane A, Hoang NH et al. **Effects of strain rate and confining pressure on the compressive behavior of Kuru granite.** International Journal of Impact Engineering. 2016 May 1;91:183-193. <https://doi.org/10.1016/j.ijimpeng.2016.01.010>

Kanerva U, Karhu M, Lagerbom J, Kronlöf A, Honkanen M, Turunen E et al. **Chemical synthesis of WC-Co from water-soluble precursors: The effect of carbon and cobalt additions to WC synthesis.** International Journal of Refractory Metals and Hard Materials. 2016 Apr 1;56:69-75. <https://doi.org/10.1016/j.jrmhm.2015.11.014>

Korkiakoski S, Brøndsted P, Sarlin E, Saarela O. **Influence of specimen type and reinforcement on measured tension-tension fatigue life of unidirectional GFRP laminates.** International Journal of Fatigue. 2016 Apr 1;85:114-129. <https://doi.org/10.1016/j.ijfatigue.2015.12.008>

Andersson P, Kilpi L, Holmberg K, Vaajoki A, Oksanen V. **Static friction measurements on steel against uncoated and coated cast iron.** Tribologia. 2016 Jan 1;34(1-2):5-40.

Paris H, Mokhtarian H, Coatanéa E, Museau M, Ituarte IF. **Comparative environmental impacts of additive and subtractive manufacturing technologies.** CIRP Annals: Manufacturing Technology. 2016;65(1):29-32. <https://doi.org/10.1016/j.cirp.2016.04.036>

Hartikainen J, Kolari K, Kouhia R. **Development and numerical implementation of an anisotropic continuum damage model for concrete.** In Advances in Fracture and Damage Mechanics XV. Trans Tech Publications Ltd. 2016. p. 115-118. (Key Engineering Materials). <https://doi.org/10.4028/www.scientific.net/KEM.713.115>

Hokka M, Mirow N, Nagel H, Vogt S, Kuokkala V-T. **DIC measurements of the human heart during cardiopulmonary bypass surgery.** In Conference Proceedings of the Society for Experimental Mechanics Series. Vol. 6. Springer New York LLC. 2016. p. 51-59 https://doi.org/10.1007/978-3-319-21455-9_6

Hilliaho K, Köliö A, Pakkala T, Lahdensivu J, Vinha J. **Effects of added glazing on Balcony indoor temperatures: Field measurements.** Energy and Buildings. 2016;128:458-472. <https://doi.org/10.1016/j.enbuild.2016.07.025>

Mäkinen J, Fränti K, Korhonen M, Fillion J, Heinisuo M. **End-plate connections in Bi-axial bending - Measurements.** In Mazzolani FM, Squillace A, Faggiano B, Bellucci F, editors, 13th International Aluminium Conference, Sustainability, Durability and Structural Advantages, : INALCO 2016; Naples; Italy; 21 September 2016 through 23 September 2016. Vol. 710. Trans Tech Publications Ltd. 2016. p. 275-280. (Key Engineering Materials). <https://doi.org/10.4028/www.scientific.net/KEM.710.275>

Lahti J. **Nanoscale barrier coating on BOPP packaging film by ALD.** In TAPPI PLACE Conference 2016: Exploring New Frontiers. TAPPI Press. 2016. p. 493-505

Hintikka J, Lehtovaara A, Mäntylä A. **Normal displacements in non-Coulomb friction conditions during fretting.** Tribology International. 2016;94:633-639. <https://doi.org/10.1016/j.triboint.2015.10.029>

Bolelli G, Milanti A, Lusvarghi L, Trombi L, Koivuluoto H, Vuoristo P. **Wear and impact behaviour of High Velocity Air-Fuel sprayed Fe-Cr-Ni-B-C alloy coatings.** Tribology International. 2016;95:372-390. <https://doi.org/10.1016/j.triboint.2015.11.036>

Ihalainen TO, Aires L, Herzog FA, Schwartlander R, Moeller J, Vogel V. **Differential basal-to-apical accessibility of lamin A/C epitopes in the nuclear lamina regulated by changes in cytoskeletal tension.** Nature Materials. 2015 Dec 1;14(12):1252-1261. <https://doi.org/10.1038/nmat4389>

Fedorik F, Malaska M, Hannila R, Haapala A. **Improving the thermal performance of concrete-sandwich envelopes in relation to the moisture behaviour of building structures in boreal conditions.** Energy and Buildings. 2015 Nov 15;107:226-233. <https://doi.org/10.1016/j.enbuild.2015.08.020>

Bourhis K, Massera J, Petit L, Koponen J, Fargues A, Cardinal T et al. **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.** Materials Research Bulletin. 2015 Oct 1;70:47-54. <https://doi.org/10.1016/j.materresbull.2015.04.017>

Sekki T, Airaksinen M, Saari A. **Impact of building usage and occupancy on energy consumption in Finnish daycare and school buildings.** Energy and Buildings. 2015 Aug 18;105:247-257. <https://doi.org/10.1016/j.enbuild.2015.07.036>

Gashti EHN, Malaska M, Kujala K. **Analysis of thermo-active pile structures and their performance under groundwater flow conditions.** Energy and Buildings. 2015 Aug 11;105:1-8. <https://doi.org/10.1016/j.enbuild.2015.07.026>

Syrjärinne P, Nummenmaa J, Thanisch P, Kerminen R, Hakulinen E. **Analysing traffic fluency from bus data.** IET Intelligent Transport Systems. 2015 Aug 1;9(6):566-572. <https://doi.org/10.1049/iet-its.2014.0192>

Haaparanta A-M, Uppstu P, Hannula M, Ellä V, Rosling A, Kellomäki M. **Improved dimensional stability with bioactive glass fibre skeleton in poly(lactide-co-glycolide) porous scaffolds for tissue engineering.** Materials Science and Engineering C: Materials for Biological Applications. 2015 Jul 20;56:457-466. 5584. <https://doi.org/10.1016/j.msec.2015.07.013>

Hakkarainen TV, Schramm A, Mäkelä J, Laukkanen P, Guina M. **Lithography-free oxide patterns as templates for self-catalyzed growth of highly uniform GaAs nanowires on Si(111).** Nanotechnology. 2015 Jul 18;26(27). 275301. <https://doi.org/10.1088/0957-4484/26/27/275301>

Carfora D, Di Gironimo G, Järvenpää J, Huhtala K, Määttä T, Siuko M. **Divertor remote handling for DEMO: Concept design and preliminary FMECA studies.** Fusion Engineering and Design. 2015 Jul 9;98-99:1437-1441. <https://doi.org/10.1016/j.fusengdes.2015.06.056>

Hintikka J, Lehtovaara A, Mäntylä A. **Fretting-induced friction and wear in large flat-on-flat contact with quenched and tempered steel.** Tribology International. 2015 Jul 2;92:191-202. <https://doi.org/10.1016/j.triboint.2015.06.008>

Mendes MR, Subramaniam NP, Wendel-Mitoraj K. **Evaluating the electrode measurement sensitivity of subdermal electroencephalography electrodes.** In International IEEE/EMBS Conference on Neural Engineering, NER. Vol. 2015-July. IEEE COMPUTER SOCIETY PRESS. 2015. p. 1092-1095 <https://doi.org/10.1109/NER.2015.7146818>

Tanskanen JMA, Kapucu FE, Hyttinen JAK. **On the threshold based neuronal spike detection, and an objective criterion for setting the threshold.** In International IEEE/EMBS Conference on Neural Engineering, NER. IEEE COMPUTER SOCIETY PRESS. 2015. p. 1016-1019 <https://doi.org/10.1109/NER.2015.7146799>

Subramaniam NP, Hyttinen J, Hatsopoulos NG, Takahashi K. **Recurrence network analysis of wide band oscillations of local field potentials from the primary motor cortex reveals rich dynamics.** In International IEEE/EMBS Conference on Neural Engineering, NER. IEEE COMPUTER SOCIETY PRESS. 2015. p. 960-963 <https://doi.org/10.1109/NER.2015.7146785>

Le T, Lin Z, Wong CP, Tentzeris MM. **Smart Skins: Could they be the ultimate sensing tool? Today's FFIDs industry and personal medical care both strongly demand accurate, reliable, robust, lo.** IEEE Nanotechnology Magazine. 2015 Jun 1;9(2):4-10. 7080864. <https://doi.org/10.1109/MNANO.2015.2410474>

Wu H, Sariola V, Zhu C, Zhao J, Sitti M, Bettinger CJ. **Transfer printing of metallic microstructures on adhesion-promoting hydrogel substrates.** Advanced Materials. 2015 Jun 1;27(22):3398-3404. <https://doi.org/10.1002/adma.201500954>

Isotahdon E, Huttunen-Saarivirta E, Heinonen S, Kuokkala VT, Paju M. **Corrosion mechanisms of sintered Nd-Fe-B magnets in the presence of water as vapour, pressurised vapour and liquid.** Journal of Alloys and Compounds. 2015 Mar 25;626:349-359. <https://doi.org/10.1016/j.jallcom.2014.12.048>

Bautista G, Mäkitalo J, Chen Y, Dhaka V, Grasso M, Karvonen L et al. **Second-harmonic generation imaging of semiconductor nanowires with focused vector beams.** Nano Letters. 2015 Feb 6;15(3):1564-1569. <https://doi.org/10.1021/nl503984b>

Ratia V, Rojacz H, Terva J, Valtonen K, Badisch E, Kuokkala VT. **Effect of Multiple Impacts on the Deformation of Wear-Resistant Steels.** Tribology Letters. 2015 Jan 21;57(2). 15. <https://doi.org/10.1007/s11249-014-0460-7>

Czaplicki R, Mäkitalo J, Siikanen R, Husu H, Lehtolahti J, Kuittinen M et al. **Second-Harmonic Generation from Metal Nanoparticles: Resonance Enhancement versus Particle Geometry.** Nano Letters. 2015 Jan 14;15(1):530-534. <https://doi.org/10.1021/nl503901e>

Mettänen M, Hirn U. **A comparison of five optical surface topography measurement methods.** TAPPI Journal. 2015 Jan 1;14(1):27-38.

Sekki T, Airaksinen M, Saari A. **Measured energy consumption of educational buildings in a Finnish city.** Energy and Buildings. 2015 Jan 1;87:105-115. <https://doi.org/10.1016/j.enbuild.2014.11.032>

Martinez F, Neculqueo G, Vasquez SO, Lemmetyinen H, Efimov A, Vivo P. **Branched thiophene oligomer/polymer bulk heterojunction organic solar cell.** In Materials Research Society Symposium Proceedings. Vol. 1737. MATERIALS RESEARCH SOCIETY. 2015. p. 19-25 <https://doi.org/10.1557/opl.2015.529>

Palazzo G, De Tullio D, Magliulo M, Mallardi A, Intranuovo F, Mulla MY et al. **Detection beyond Debye's length with an electrolyte-gated organic field-effect transistor.** Advanced Materials. 2015;27(5):911-916. <https://doi.org/10.1002/adma.201403541>

Lindroos M, Apostol M, Kuokkala VT, Laukkanen A, Valtonen K, Holmberg K et al. **Experimental study on the behavior of wear resistant steels under high velocity single particle impacts.** International Journal of Impact Engineering. 2015;78:114-127. <https://doi.org/10.1016/j.ijimpeng.2014.12.002>

Barreca D, Carraro G, Gasparotto A, Maccato C, Warwick MEA, Kaunisto K et al. **Fe₂O₃-TiO₂ Nano-heterostructure Photoanodes for Highly Efficient Solar Water Oxidation.** Advanced Materials Interfaces. 2015;2(17). <https://doi.org/10.1002/admi.201500313>

Hokka M, Östman K, Rämö J, Kuokkala VT. **High Temperature Tension HSB Device Based on Direct Electrical Heating.** In Song B, Casem D, Kimberley J, editors, Dynamic Behavior of Materials, Volume 1: Proceedings of the 2014 Annual Conference on Experimental and Applied Mechanics. Vol. 65. Springer. 2015. p. 227-233. (Conference Proceedings of the Society for Experimental Mechanics Series). https://doi.org/10.1007/978-3-319-06995-1_34

Pykkänen K, Nurmikolu A, Guthrie WS, Argyle HM. **Measurements and Modeling of Frost Depth in Railway Tracks.** In 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 <https://doi.org/10.1061/9780784479315.012>

Mäkelä JM, Haapanen J, Aromaa M, Teisala H, Tuominen M, Stepien M et al. **Roll-to-roll coating by liquid flame spray nanoparticle deposition.** In Materials Research Society Symposium Proceedings. Vol. 1747. MATERIALS RESEARCH SOCIETY. 2015. p. 37-42 <https://doi.org/10.1557/opl.2015.530>

Björling M, Miettinen J, Marklund P, Lehtovaara A, Larsson R. **The correlation between gear contact friction and ball on disc friction measurements.** Tribology International. 2015;83:114-119. <https://doi.org/10.1016/j.triboint.2014.11.007>

Lindroos M, Apostol M, Heino V, Valtonen K, Laukkanen A, Holmberg K et al. **The deformation, strain hardening, and wear behavior of chromium-alloyed hadfield steel in abrasive and impact conditions.** Tribology Letters. 2015;57(3). 24. <https://doi.org/10.1007/s11249-015-0477-6>

Seppälä J, Salmenperä M. **Towards dependable automation.** In Cyber Security: Analytics, Technology and Automation: Part IV. Springer International Publishing. 2015. p. 229-249. (Intelligent Systems, Control and Automation: Science and Engineering). https://doi.org/10.1007/978-3-319-18302-2_15

Sariola V, Sitti M. **Mechanically Switchable Elastomeric Microfibrillar Adhesive Surfaces for Transfer Printing.** Advanced Materials Interfaces. 2014 Jul 1;1(4). 1300159. <https://doi.org/10.1002/admi.201300159>

Borah D, Rasappa S, Senthamaraiannan R, Holmes JD, Morris MA. **Graphoepitaxial Directed Self-Assembly of Polystyrene-Block-Polydimethylsiloxane Block Copolymer on Substrates Functionalized with Hexamethyldisilazane to Fabricate Nanoscale Silicon Patterns.** Advanced Materials Interfaces. 2014 Jun 1;1(3). 1300102. <https://doi.org/10.1002/admi.201300102>

Teisala H, Tuominen M, Kuusipalo J. **Superhydrophobic Coatings on Cellulose-Based Materials: Fabrication, Properties, and Applications.** Advanced Materials Interfaces. 2014 Feb 1;1(1):1-20. 1300026. <https://doi.org/10.1002/admi.201300026>

Saintsing CD, Cook BS, Tentzeris MM. **An origami inspired reconfigurable spiral antenna.** In 38th Mechanisms and Robotics Conference. Vol. 5B. The American Society of Mechanical Engineers ASME. 2014 <https://doi.org/10.1115/DETC201435353>

Coatanéa E, Nonsiri S, Christophe F, Mokammel F. **Graph based representation and analyses for conceptual stages.** In 34th Computers and Information in Engineering Conference. Vol. 1A. The American Society of Mechanical Engineers ASME. 2014 <https://doi.org/10.1115/DETC201435652>

Tzounis L, Debnath S, Rooj S, Fischer D, Mäder E, Das A et al. **High performance natural rubber composites with a hierarchical reinforcement structure of carbon nanotube modified natural fibers.** *Materials and Design*. 2014;58:1-11. <https://doi.org/10.1016/j.matdes.2014.01.071>

Lahti J, Johansson P, Lahtinen K, Cameron DC, Seppänen T. **Improving the effect of nanoscale barrier coating on BOPP film properties: Influence of substrate contamination, web handling and pretreatments.** In TAPPI PLACE Conference 2014. Vol. 2. TAPPI Press. 2014. p. 1039-1061

Gordon TR, Paik T, Klein DR, Naik GV, Caglayan H, Boltasseva A et al. **Shape-dependent plasmonic response and directed self-assembly in a new semiconductor building block, indium-doped cadmium oxide (ICO).** *Nano Letters*. 2013 Jun 12;13(6):2857-2863. <https://doi.org/10.1021/nl4012003>

Colace L, Santoni F, Assanto G. **A near-infrared optoelectronic approach to detection of road conditions.** *Optics and Lasers in Engineering*. 2013 May;51(5):633-636. <https://doi.org/10.1016/j.optlaseng.2013.01.003>

Liimatainen V, Sariola V, Zhou Q. **Controlling liquid spreading using microfabricated undercut edges.** *Advanced Materials*. 2013 Apr 24;25(16):2275-2278. <https://doi.org/10.1002/adma.201204696>

Magliulo M, Mallardi A, Mulla MY, Cotrone S, Pistillo BR, Favia P et al. **Electrolyte-gated organic field-effect transistor sensors based on supported biotinylated phospholipid bilayer.** *Advanced Materials*. 2013 Apr 11;25(14):2090-2094. <https://doi.org/10.1002/adma.201203587>

Cochrane C, Mordon SR, Lesage JC, Koncar V. **New design of textile light diffusers for photodynamic therapy.** *Materials Science and Engineering C: Materials for Biological Applications*. 2013 Apr 1;33(3):1170-1175. <https://doi.org/10.1016/j.msec.2012.12.007>

Rasappa S, Borah D, Faulkner CC, Lutz T, Shaw MT, Holmes JD et al. **Fabrication of a sub-10 nm silicon nanowire based ethanol sensor using block copolymer lithography.** *Nanotechnology*. 2013 Feb 15;24(6):065503. <https://doi.org/10.1088/0957-4484/24/6/065503>

Fafarman AT, Hong SH, Caglayan H, Ye X, Diroll BT, Paik T et al. **Chemically tailored dielectric-to-metal transition for the design of metamaterials from nanoimprinted colloidal nanocrystals.** *Nano Letters*. 2013 Feb 13;13(2):350-357. <https://doi.org/10.1021/nl303161d>

Debnath SC, Das A, Basu D, Heinrich G. **Naturally occurring amino acids: A suitable substitute of N-N'-di-phenyl guanidine (DPG) in silica tyre formulation?** *KGK: KAUTSCHUK GUMMI KUNSTSTOFFE*. 2013 Jan;66(1-2):25-31.

Lahtinen K, Lahti J, Johansson P, Seppänen T, Cameron DC. **Improving the effect of a nanoscale barrier coating on BOPP film properties by surface pretreatments.** In 14th European PLACE Conference 2013. Vol. 1. TAPPI Press. 2013. p. 469-493

Ronkainen H, Kanerva U, Varis T, Ruusuvaori K, Turunen E, Peräntie J et al. **Materials for electronics by thermal spraying .** In Physical and Numerical Simulation of Materials Processing VII. Vol. 762. 2013. p. 451-456. (Materials Science Forum). <https://doi.org/10.4028/www.scientific.net/MSF.762.451>

Alatalo M, Pitkänen H, Ropo M, Kokko K, Vitos L. **Modeling of steels and steel surfaces using quantum mechanical first principles methods.** In Physical and Numerical Simulation of Materials Processing VII. Vol. 762. 2013. p. 445-450. (Materials Science Forum). <https://doi.org/10.4028/www.scientific.net/MSF.762.445>

Mokammel F, Coatanea E, Christophe F, Ba Khouya M, Medyna G. **Towards an approach for evaluating the quality of requirements.** In 33rd Computers and Information in Engineering Conference. Vol. 2 B. American Society of Mechanical Engineers. 2013. V02BT02A024 <https://doi.org/10.1115/DETC2013-13708>

Wang H, Feng Y, Fang Z, Yuan W, Khan M. **Co-electrospun blends of PU and PEG as potential biocompatible scaffolds for small-diameter vascular tissue engineering**. *Materials Science and Engineering C: Materials for Biological Applications*. 2012 Dec 1;32(8):2306-2315. <https://doi.org/10.1016/j.msec.2012.07.001>

Kouhia R, Tůma M, Mäkinen J, Fedoroff A, Marjamäki H. **Implementation of a direct procedure for critical point computations using preconditioned iterative solvers**. *Computers & Structures*. 2012 Oct;108-109:110-117. <https://doi.org/10.1016/j.compstruc.2012.02.009>

Subramaniam K, Das A, Heinrich G. **Highly conducting polychloroprene composites based on multi-walled carbon nanotubes and 1-butyl 3-methyl imidazolium bis(trifluoromethylsulphonyl)imide**. *KGK: KAUTSCHUK GUMMI KUNSTSTOFFE*. 2012 Jul;65(7-8):44-46.

Ahmed R, Priimagi A, Faul CFJ, Manners I. **Redox-active, organometallic surface-relief gratings from azobenzene-containing polyferrocenylsilane block copolymers**. *Advanced Materials*. 2012 Feb 14;24(7):926-931. <https://doi.org/10.1002/adma.201103793>

Caraffi C, Vojir T, Trefný J, Šochman J, Matas J. **A system for real-time detection and tracking of vehicles from a single car-mounted camera**. In 2012 15th International IEEE Conference on Intelligent Transportation Systems, ITSC 2012. 2012. p. 975-982. 6338748 <https://doi.org/10.1109/ITSC.2012.6338748>

Yang D, Feng Y, Behl M, Lendlein A, Zhao H, Khan M et al. **Biomimetic hemo-compatible surfaces of polyurethane by grafting copolymer brushes of poly(ethylene glycol) and poly(phosphorylcholine methacrylate)**. In *Multifunctional Polymer-Based Materials*. Vol. 1403. 2012. p. 171-176 <https://doi.org/10.1557/opl.2012.702>

Borah D, Rasappa S, Kosmala B, Holmes JD, Morris MA. **Block copolymer self-assembly on ethylene glycol (EG) self-assembled monolayer (SAM) for nanofabrication**. In *Nanoscale Materials Modification by Photon, Ion, and Electron Beams*. Vol. 1450. 2012. p. 8-13 <https://doi.org/10.1557/opl.2012.1224>

Malas A, Das CK, Das A, Heinrich G. **Development of expanded graphite filled natural rubber vulcanizates in presence and absence of carbon black: Mechanical, thermal and morphological properties**. *Materials and Design*. 2012;39:410-417. <https://doi.org/10.1016/j.matdes.2012.03.007>

Rasilo P, Belahcen A, Arkkio A. **Effect of rotor pole-shoe construction on losses of inverter-fed synchronous motors**. In *Proceedings - 2012 20th International Conference on Electrical Machines, ICEM 2012*. 2012. p. 1282-1286 <https://doi.org/10.1109/ICEIMach.2012.6350042>

Kurnitski J, Saari A, Kalamees T, Vuolle M, Niemelä J, Tark T. **Cost optimal and nearly zero (nZEB) energy performance calculations for residential buildings with REHVA definition for nZEB national implementation**. *Energy and Buildings*. 2011 Nov;43(11):3279-3288. <https://doi.org/10.1016/j.enbuild.2011.08.033>

Kravchenko A, Shevchenko A, Ovchinnikov V, Priimagi A, Kaivola M. **Optical interference lithography using azobenzene-functionalized polymers for micro-and nanopatterning of silicon**. *Advanced Materials*. 2011 Sep 22;23(36):4174-4177. <https://doi.org/10.1002/adma.201101888>

Chang B, Routa I, Sariola V, Zhou Q. **Self-alignment of RFID dies on four-pad patterns with water droplet for sparse self-assembly**. *Journal of Micromechanics and Microengineering*. 2011 Sep;21(9). 095024. <https://doi.org/10.1088/0960-1317/21/9/095024>

Linko V, Leppiniemi J, Paasonen ST, Hytönen VP, Jussi Toppari J. **Defined-size DNA triple crossover construct for molecular electronics: Modification, positioning and conductance properties**. *Nanotechnology*. 2011 Jul 8;22(27). 275610. <https://doi.org/10.1088/0957-4484/22/27/275610>

Tuurna S, Varis T, Penttilä K, Ruusuvuori K, Holmström S, Yli-Olli S. **Optimised selection of new protective coatings for biofuel boiler applications**. *Materials and Corrosion-Werkstoffe und Korrosion*. 2011 Jul;62(7):642-649. <https://doi.org/10.1002/maco.201005898>

Lisjak D, Lintunen P, Hujanen A, Varis T, Bolelli G, Lusvarghi L et al. **Hexaferrite/polyethylene Composite coatings prepared with flame spraying**. *Materials Letters*. 2011 Feb 15;65(3):534-536. <https://doi.org/10.1016/j.matlet.2010.10.076>

Chang B, Sariola V, Jääskeläinen M, Zhou Q. **Self-alignment in the stacking of microchips with mist-induced water droplets**. *Journal of Micromechanics and Microengineering*. 2011 Jan;21(1). 015016. <https://doi.org/10.1088/0960-1317/21/1/015016>

Vähä-Nissi M, Hirvikorpi T, Sievänen J, Salo E, Harlin A, Johansson P et al. **Effect of pre-treatments on barrier properties of layers applied by atomic layer deposition onto polymer-coated substrates**. In 13th European PLACE Conference 2011. Vol. 1. 2011. p. 447

Medyna G, Coatanea E, Millet D. **Evaluation of parts of a boat cabin based on exergy - Focusing on environmental and economic assessments**. In ASME 2011 International Mechanical Engineering Congress and Exposition, IMECE 2011. PARTS A AND B ed. Vol. 4. AMER SOC MECHANICAL ENGINEERS. 2011. p. 1083-1092

Teisala H, Tuominen M, Aromaa M, Mäkelä JM, Stepien M, Saarinen JJ et al. **Nanoparticle deposition on packaging materials by the liquid flame spray**. In 13th European PLACE Conference 2011. Vol. 1. 2011

Christophe F, Ritola T, Coatanéa E, Bernard A. **Semantic analysis of function-solution duality**. In ASME 2011 International Mechanical Engineering Congress and Exposition, IMECE 2011. Vol. 3. 2011. p. 611-619
<https://doi.org/10.1115/IMECE2011-63546>

Coatanéa E, Ritola T, Tumer IY, Jensen D. **A framework for building behavioral models for design-stage failure identification using dimensional analysis**. In Proceedings of the ASME Design Engineering Technical Conference. Vol. 5. AMER SOC MECHANICAL ENGINEERS. 2010. p. 591-601 <https://doi.org/10.1115/DETC2010-28864>

Lahti J, Tuominen M, Penttinen T, Räsänen JP, Kuusipalo J. **The effects of corona and flame treatment: Part 2. PE-HD and PP coated papers**. In TAPPI Press - 12th European PLACE Conference 2009. Vol. 1. 2009. p. 278-314

Coatanéa E, Yannou B, Honkala S, Lajunen A, Saarelainen T, Makkonen P. **Measurement theory and dimensional analysis: Methodological impact on the comparison and evaluation process**. In 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 <https://doi.org/10.1115/DETC2007-34364>

Lahtinen K, Kuusipalo J. **Statistical modeling of water vapor transmission rates for extrusion-coated papers**. In TAPPI 2008 PLACE Conference: Innovations in Flexible Consumer Packaging. 2008

Lorimer GW, Dicken R, Peura P, Pilkington R, Younes CM, Allen GC et al. **The effect of phosphorous and arsenic on the fracture behaviour of a 2,25% Cr-1% Mo Steel**. *Materials Science Forum*. 1996 Dec 1;207-209(PART 2):645-648.