

**Direct measurement of the kinetic energy shift between the molecular and atomic M4.5N4.5N4.5 Auger spectra of iodine**  
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**Anomalous Auger-electron spectra of metallic calcium**

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**A finite cluster approach to the electron-hole pair damping of the adsorbate vibration: CO adsorbed on Cu(100)**

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**A Finite Cluster Approach to the Electron-Hole Pair Damping of the Adsorbate Vibration: CO Adsorbed on Cu(100)**

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#### **From a localized H<sub>3</sub>O radical to a delocalized H<sub>3</sub>O<sup>+</sup>•e<sup>-</sup> solvent-separated pair by sequential hydration**

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#### **The Discovery of Compounds That Stimulate the Activity of Kallikrein-Related Peptidase3 (KLK3)**

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#### **Modification of olivomycin A at the side chain of the aglycon yields the derivative with perspective antitumor characteristics**

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#### **Conductive layers on surface modified natural fibre based substrates for printed functionality**

Valtakari, D., Bollström, R., Tuominen, M., Teisala, H., Aromaa, M., Toivakka, M., Kuusipalo, J., Mäkelä, J. M., Uozumi, J. & Saarinen, J. J., 2012, *AICHe 2012 - 2012 AICHe Annual Meeting, Conference Proceedings*.

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

**Structure, dynamics, and reactivity of hydrated electrons by Ab initio molecular dynamics**

Marsalek, O., Uhlig, F., Vandevondele, J. & Jungwirth, P., 17 Jan 2012, In : Accounts of Chemical Research. 45, 1, p. 23-32 10 p.

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

**Surface-relief gratings and stable birefringence inscribed using light of broad spectral range in supramolecular polymer-bisazobenzene complexes**

Koskela, J. E., Vapaavuori, J., Hautala, J., Priimagi, A., Faul, C. F. J., Kaivola, M. & Ras, R. H. A., 26 Jan 2012, In : Journal of Physical Chemistry C. 116, 3, p. 2363-2370 8 p.

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

**Glycerol mediated synthesis of 5-substituted 1H-tetrazole under catalyst free conditions**

Nandre, K. P., Salunke, J. K., Nandre, J. P., Patil, V. S., Borse, A. U. & Bhosale, S. V., Feb 2012, In : Chinese Chemical Letters. 23, 2, p. 161-164 4 p.

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

**A novel thermotropic elastomer based on highly-filled LDH-SSB composites**

Das, A., George, J. J., Kutlu, B., Leuteritz, A., Wang, D. Y., Rooj, S., Jurk, R., Rajeshbabu, R., Stöckelhuber, K. W., Galiatsatos, V. & Heinrich, G., 27 Feb 2012, In : Macromolecular Rapid Communications. 33, 4, p. 337-342 6 p.

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

**Excited-state polarizability in crystalline sexithiophene: Charge-transfer and vibronic effects**

Stradomska, A., Kulig, W., Slawik, M. & Petelenz, P., 9 Mar 2012, In : Chemical Physics Letters. 529, p. 27-30 4 p.

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

**Highly exfoliated natural rubber/Clay composites by "propping-open procedure": The influence of fatty-acid chain length on exfoliation**

Rooj, S., Das, A., Stöckelhuber, K. W., Reuter, U. & Heinrich, G., Apr 2012, In : Macromolecular Materials and Engineering. 297, 4, p. 369-383 15 p.

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

**Structural characteristics and flammability of fire retarding EPDM/layered double hydroxide (LDH) nanocomposites**

Wang, D. Y., Das, A., Leuteritz, A., Mahaling, R. N., Jehnichen, D., Wagenknecht, U. & Heinrich, G., 21 Apr 2012, In : RSC Advances. 2, 9, p. 3927-3933 7 p.

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

**Elemental and mixed actinide dioxides: An ab initio study**

Ma, L., Atta-Fynn, R. & Ray, A. K., Jun 2012, In : Journal of Theoretical and Computational Chemistry. 11, 3, p. 611-629 19 p.

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

**Behavior of 4-hydroxynonenal in phospholipid membranes**

Vazdar, M., Jurkiewicz, P., Hof, M., Jungwirth, P. & Cwiklik, L., 7 Jun 2012, In : Journal of Physical Chemistry Part B. 116, 22, p. 6411-6415 5 p.

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

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

Priimagi, A., Cavallo, G., Forni, A., Gorynsztejn-Leben, M., Kaivola, M., Metrangolo, P., Milani, R., Shishido, A., Pilati, T., Resnati, G. & Terraneo, G., 20 Jun 2012, In : Advanced Functional Materials. 22, 12, p. 2572-2579 8 p.

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

**Molecular mechanisms of ion-specific effects on proteins**

Rembert, K. B., Paterová, J., Heyda, J., Hilty, C., Jungwirth, P. & Cremer, P. S., 20 Jun 2012, In : Journal of the American Chemical Society. 134, 24, p. 10039-10046 8 p.



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

**Accurate description of aqueous carbonate ions: An effective polarization model verified by neutron scattering**

Mason, P. E., Wernersson, E. & Jungwirth, P., 19 Jul 2012, In : Journal of Physical Chemistry Part B. 116, 28, p. 8145-8153 9 p.

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

**Nematicons in azobenzene liquid crystals**

Serak, S. V., Tabiryani, N. V. & Assanto, G., 19 Jul 2012, In : Molecular Crystals and Liquid Crystals. 559, p. 202-213 12 p.

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

**Impact of biodiesel application at various blending ratios on passenger cars of different fueling technologies**

Kousoulidou, M., Ntziachristos, L., Fontaras, G., Martini, G., Dilara, P. & Samaras, Z., Aug 2012, In : Fuel. 98, p. 88-94 7 p.

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

**Solvation and ion-pairing properties of the aqueous sulfate anion: Explicit versus effective electronic polarization**

Pegado, L., Marsalek, O., Jungwirth, P. & Wernersson, E., 7 Aug 2012, In : Physical Chemistry Chemical Physics. 14, 29, p. 10248-10257 10 p.

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

**Effect of sol-gel derived in situ silica on the morphology and mechanical behavior of natural rubber and acrylonitrile butadiene rubber blends**

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**Affine-response model of molecular solvation of ions: Accurate predictions of asymmetric charging free energies**

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**Biomimetic surface modification of polycarbonateurethane film via phosphorylcholine-graft for resisting platelet adhesion**

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

**Kinetics of filler wetting and dispersion in carbon nanotube/rubber composites**

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**Fabrication of ssDNA/oligo(ethylene glycol) monolayers and complex nanostructures by an irradiation-promoted exchange reaction**

Khan, M. N., Tjong, V., Chilkoti, A. & Zharnikov, M., 8 Oct 2012, In : Angewandte Chemie (International Edition). 51, 41, p. 10303-10306 4 p.

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**Azobenzene photomechanics: Prospects and potential applications**

Mahimwalla, Z., Yager, K. G., Mamiya, J. I., Shishido, A., Priimagi, A. & Barrett, C. J., Nov 2012, In : Polymer Bulletin. 69, 8, p. 967-1006 40 p.

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**Influence of ionic liquids on the dielectric relaxation behavior of CNT based elastomer nanocomposites**

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**Superquenching of SYBRGreen dye fluorescence in complex with DNA by gold nanoparticles**

Lisitsyna, E. S., Lygo, O. N., Durandin, N. A., Dement'eva, O. V., Rudoi, V. M. & Kuzmin, V. A., Nov 2012, In : HIGH ENERGY CHEMISTRY. 46, 6, p. 363-367 5 p.

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

**Transforming anion instability into stability: Contrasting photoionization of three protonation forms of the phosphate ion upon moving into water**

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

**Search for global minimum geometries of medium sized Cd<sub>n</sub>Te<sub>n</sub> clusters (n = 15, 16, 20, 24 and 28)**

Ma, L., Wang, J. & Wang, G., 12 Nov 2012, In : Chemical Physics Letters. 552, p. 73-77 5 p.

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

**Peptide salt bridge stability: From gas phase via microhydration to bulk water simulations**

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**Semiclassical hybrid approach to condensed phase molecular dynamics: Application to the I<sub>2</sub>Kr<sub>17</sub> cluster**

Buchholz, M., Goletz, C. M., Grossmann, F., Schmidt, B., Heyda, J. & Jungwirth, P., 26 Nov 2012, In : Journal of Physical Chemistry A. 116, 46, p. 11199-11210 12 p.

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

**New reports on anti-bacterial and anti-candidal activities of fatty acid methyl esters (FAME) obtained from *Scenedesmus bijugatus* var. *bicellularis* biomass**

Mubarakali, D., Praveenkumar, R., Shenbagavalli, T., Mari Nivetha, T., Parveez Ahamed, A., Al-Dhabi, N. A. & Thajuddin, N., 28 Nov 2012, In : RSC Advances. 2, 30, p. 11552-11556 5 p.

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

**Improving the effect of a nanoscale barrier coating on BOPP film properties by surface pretreatments**

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

**Molecular mechanism of T-cell protein tyrosine phosphatase (TCPTP) activation by mitoxantrone**

Ylilauri, M., Mattila, E., Nurminen, E. M., Käpylä, J., Niinivehmas, S. P., Määttä, J. A., Pentikäinen, U., Ivaska, J. & Pentikäinen, O. T., 2013, In : *Biochimica et biophysica acta: proteins and proteomics*. 1834, 10, p. 1988-1997 10 p.

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

**A 'clusters-in-liquid' method for calculating infrared spectra identifies the proton-transfer mode in acidic aqueous solutions**

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**A potential nonthrombogenic small-diameter vascular scaffold with polyurethane/poly(ethylene glycol) hybrid materials by electrospinning technique**

Wang, H., Feng, Y., Zhao, H., Fang, Z., Khan, M. & Guo, J., Feb 2013, In : Journal Nanoscience and Nanotechnology. 13, 2, p. 1578-1582 5 p.

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

**Density functional theory study of FePd<sub>n</sub> (n = 2-14) clusters and interactions with small molecules**

Ma, L., Wang, J., Hao, Y. & Wang, G., Feb 2013, In : Computational Materials Science. 68, p. 166-173 8 p.

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### **Networking of ionic liquid modified CNTs in SSBR**

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

Fafarman, A. T., Hong, S. H., Caglayan, H., Ye, X., Diroll, B. T., Paik, T., Engheta, N., Murray, C. B. & Kagan, C. R., 13 Feb 2013, In : Nano Letters. 13, 2, p. 350-357 8 p.  
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### **Aqueous guanidinium-carbonate interactions by molecular dynamics and neutron scattering: Relevance to ion-protein interactions**

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### **Fabrication of a sub-10 nm silicon nanowire based ethanol sensor using block copolymer lithography**

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### **Optical vortex generation in nematic liquid crystal light valves**

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### **Molecularly functionalized silicon substrates for orientation control of the microphase separation of PS-b-PMMA and PS-b-PDMS block copolymer systems**

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### **Site-specific analysis of dipole polarizabilities of heterogeneous systems: Iron-doped Si<sub>n</sub> (n = 1-14) clusters**

Ma, L., Wang, J. & Wang, G., 7 Mar 2013, In : Journal of Chemical Physics. 138, 9, 094304.  
Research output: Contribution to journal > Article > Scientific > peer-review

### **Biomimetic zinc chlorin-poly(4-vinylpyridine) assemblies: Doping level dependent emission-absorption regimes**

Pale, V., Nikkonen, T., Vapaavuori, J., Kostianen, M., Kavakka, J., Selin, J., Tittonen, I. & Helaja, J., 21 Mar 2013, In : Journal of Materials Chemistry C. 1, 11, p. 2166-2173 8 p.  
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### **Understanding the reinforcing behavior of expanded clay particles in natural rubber compounds**

Rooj, S., Das, A., Stöckelhuber, K. W., Wang, D. Y., Galiatsatos, V. & Heinrich, G., 14 Apr 2013, In : Soft Matter. 9, 14, p. 3798-3808 11 p.  
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### **Nanoindentation study of light-induced softening of supramolecular and covalently functionalized azo polymers**

Vapaavuori, J., Mahimwalla, Z., Chromik, R. R., Kaivola, M., Priimagi, A. & Barrett, C. J., 28 Apr 2013, In : Journal of Materials Chemistry C. 1, 16, p. 2806-2810 5 p.  
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### **Immobilized bioactive agents onto polyurethane surface with heparin and phosphorylcholine group**

Tan, M., Feng, Y., Wang, H., Zhang, L., Khan, M., Guo, J., Chen, Q. & Liu, J., May 2013, In : Macromolecular Research. 21, 5, p. 541-549 9 p.

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**Screening pretreatment methods to enhance thermophilic anaerobic digestion of pulp and paper mill wastewater treatment secondary sludge**

Bayr, S., Kaparaju, P. & Rintala, J., 1 May 2013, In : Chemical Engineering Journal. 223, p. 479-486 8 p.

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**Depth profiling of PLGA copolymer in a novel biomedical bilayer using confocal raman spectroscopy**

McManamon, C., Delaney, P., Kavanagh, C., Wang, J. J., Rasappa, S. & Morris, M. A., 14 May 2013, In : Langmuir. 29, 19, p. 5905-5910 6 p.

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**Surface properties and interaction forces of biopolymer-doped conductive polypyrrole surfaces by atomic force microscopy**

Pelto, J. M., Haimi, S. P., Siljander, A. S., Miettinen, S. S., Tappura, K. M., Higgins, M. J. & Wallace, G. G., 21 May 2013, In : Langmuir. 29, 20, p. 6099-6108 10 p.

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

**Cation-specific effects on enzymatic catalysis driven by interactions at the tunnel mouth**

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

**Cell toxicity and oxidative potential of engine exhaust particles: Impact of using particulate filter or biodiesel fuel blend**

Gerlofs-Nijland, M. E., Totlandsdal, A. I., Tzamkiozis, T., Leseman, D. L. A. C., Samaras, Z., Låg, M., Schwarze, P., Ntziachristos, L. & Cassee, F. R., 4 Jun 2013, In : Environmental Science and Technology. 47, 11, p. 5931-5938 8 p.

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**Shape-dependent plasmonic response and directed self-assembly in a new semiconductor building block, indium-doped cadmium oxide (ICO)**

Gordon, T. R., Paik, T., Klein, D. R., Naik, G. V., Caglayan, H., Boltasseva, A. & Murray, C. B., 12 Jun 2013, In : Nano Letters. 13, 6, p. 2857-2863 7 p.

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**Development and characterization of poly( $\epsilon$ -caprolactone) hollow fiber membranes for vascular tissue engineering**

Diban, N., Haimi, S., Bolhuis-Versteeg, L., Teixeira, S., Miettinen, S., Poot, A., Grijpma, D. & Stamatialis, D., 1 Jul 2013, In : Journal of Membrane Science. 438, p. 29-37 9 p.

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**Photoswitchable hydrogel surface topographies by polymerisation-induced diffusion**

Stumpel, J. E., Liu, D., Broer, D. J. & Schenning, A. P. H. J., 2 Jul 2013, In : Chemistry: A European Journal. 19, 33, p. 10922-10927 6 p.

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**Reversal of the Hofmeister series: Specific ion effects on peptides**

Paterová, J., Rembert, K. B., Heyda, J., Kurra, Y., Okur, H. I., Liu, W. R., Hilty, C., Cremer, P. S. & Jungwirth, P., 11 Jul 2013, In : Journal of Physical Chemistry Part B. 117, 27, p. 8150-8158 9 p.

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**Tuning PDMS brush chemistry by UV-O<sub>3</sub> exposure for PS-b-PDMS microphase separation and directed self-assembly**

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### **Mechanisms of acceleration and retardation of water dynamics by ions**

Stirnemann, G., Wernersson, E., Jungwirth, P. & Laage, D., 14 Aug 2013, In : Journal of the American Chemical Society. 135, 32, p. 11824-11831 8 p.

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### **Importance of the ion-pair interactions in the OPEP coarse-grained force field: Parametrization and validation**

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### **Reversible biofunctionalization of surfaces with a switchable mutant of avidin**

Pollheimer, P., Taskinen, B., Scherfler, A., Gusenkoy, S., Creus, M., Wiesauer, P., Zauner, D., Schöfberger, W., Schwarzinger, C., Ebner, A., Tampé, R., Stutz, H., Hytönen, V. P. & Gruber, H. J., 16 Oct 2013, In : Bioconjugate Chemistry. 24, 10, p. 1656-1668 13 p.

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### **Porphyrin adsorbed on the (1010) surface of the wurtzite structure of ZnO-conformation induced effects on the electron transfer characteristics**

Niskanen, M., Kuisma, M., Cramariuc, O., Golovanov, V., Hukka, T. I., Tkachenko, N. & Rantala, T. T., 28 Oct 2013, In : Physical Chemistry Chemical Physics. 15, 40, p. 17408-17418 11 p.

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Uhlig, F. & Jungwirth, P., Nov 2013, In : ZEITSCHRIFT FÜR PHYSIKALISCHE CHEMIE-INTERNATIONAL JOURNAL OF RESEARCH IN PHYSICAL CHEMISTRY AND CHEMICAL PHYSICS. 227, 11, p. 1583-1593 11 p.

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### **Soft-graphoepitaxy using nanoimprinted polyhedral oligomeric silsesquioxane substrates for the directed self-Assembly of PS-b-PDMS**

Borah, D., Simao, C. D., Senthamaraiannan, R., Rasappa, S., Francone, A., Lorret, O., Salaun, M., Kosmala, B., Kehagias, N., Zelsmann, M., Sotomayor-Torres, C. M. & Morris, M. A., Nov 2013, In : European Polymer Journal. 49, 11, p. 3512-3521 10 p.

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Priimagi, A., Cavallo, G., Metrangolo, P. & Resnati, G., 19 Nov 2013, In : Accounts of Chemical Research. 46, 11, p. 2686-2695 10 p.

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### **Ion pairing in aqueous lithium salt solutions with monovalent and divalent counter-anions**

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**Release of halide ions from the buried active site of the haloalkane dehalogenase LinB revealed by stopped-flow fluorescence analysis and free energy calculations**

Hladilkova, J., Prokop, Z., Chaloupkova, R., Damborsky, J. & Jungwirth, P., 21 Nov 2013, In : Journal of Physical Chemistry Part B. 117, 46, p. 14329-14335 7 p.

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**Fabrication of ssDNA/Oligo(ethylene glycol) monolayers and patterns by exchange reaction promoted by ultraviolet light irradiation**

Khan, M. N. & Zharnikov, M., 27 Nov 2013, In : Journal of Physical Chemistry C. 117, 47, p. 24883-24893 11 p.

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

**Effect of surface morphology of poly( $\epsilon$ -caprolactone) scaffolds on adipose stem cell adhesion and proliferation**

Diban, N., Haimi, S. P., Bolhuis-Versteeg, L., Teixeira, S., Miettinen, S., Poot, A. A., Grijpma, D. W. & Stamatialis, D., Dec 2013, In : Macromolecular symposia. 334, 1, p. 126-132 7 p.

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**Location of dispersing agent in rubber nanocomposites during mixing process**

Le, H. H., Oßwald, K., Wießner, S., Das, A., Stöckelhuber, K. W., Boldt, R., Gupta, G., Heinrich, G. & Radusch, H. J., 13 Dec 2013, In : Polymer. 54, 26, p. 7009-7021 13 p.

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**Analysis of free, mono- and diacetylated polyamines from human urine by LC-MS/MS**

Häkkinen, M. R., Roine, A., Auriola, S., Tuokko, A., Veskimäe, E., Keinänen, T. A., Lehtimäki, T., Oksala, N. & Vepsäläinen, J., 15 Dec 2013, In : JOURNAL OF CHROMATOGRAPHY B: ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES. 941, p. 81-89 9 p.

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**Self-assembly of polystyrene-block-poly(4-vinylpyridine) block copolymer on molecularly functionalized silicon substrates: Fabrication of inorganic nanostructured etchmask for lithographic use**

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**A full-potential linearized augmented plane wave study of the interaction of CO<sub>2</sub> with  $\alpha$ -Pu (020) surface nanolayers**

Wang, J. & Ray, A. K., 2014, In : Journal of Computational and Theoretical Nanoscience. 11, 7, p. 1710-1717 8 p.

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**A microscopic view of the mechanisms of active transport across the cellular membrane**

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**Direct observation of the collapse of the delocalized excess electron in water**

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**Effect of non-rubber components of NR on the carbon nanotube (CNT) localization in SBR/NR blends**

Le, H. H., Parsekar, M., Ilisch, S., Henning, S., Das, A., Stöckelhuber, K. W., Beiner, M., Ho, C. A., Adhikari, R., Wießner, S., Heinrich, G. & Radosch, H. J., 2014, In : *Macromolecular Materials and Engineering*. 299, 5, p. 569-582 14 p.  
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**Fabrication of 3-D nanodimensioned electric double layer capacitor structures using block copolymer templates**

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**Improving the effect of nanoscale barrier coating on BOPP film properties: Influence of substrate contamination, web handling and pretreatments**

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**Kinetics of bioconjugate nanoparticle label binding in a sandwich-type immunoassay**

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**Magnetic origin of the chemical balance in alloyed Fe-Cr stainless steels: First-principles and Ising model study**

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

**Molekuly a ionty v pohybu: Počítačové simulace biochemických a biofyzikálních procesů**

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**Novel derivatives of bacteriochlorophyll a: Complex formation with albumin and the mechanism of tumor cell photodamage**

Akimova, A. V., Grin, M. A., Golovina, G. V., Kokrashvili, T. A., Vinogradov, A. M., Mironov, A. F., Rychkov, G. N., Shtil, A. A., Kuzmin, V. A. & Durandin, N. A., 2014, In : *DOKLADY BIOCHEMISTRY AND BIOPHYSICS*. 454, 1, p. 17-20 4 p.  
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**pH-dependent deformations of the energy landscape of avidin-like proteins investigated by single molecule force spectroscopy**

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**Study of the kinetics and mechanism of rapid self-assembly in block copolymer thin films during solvo-microwave annealing**

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**Natural thermal adaptation increases heat shock protein levels and decreases oxidative stress**

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**Both zundel and eigen isomers contribute to the IR spectrum of the gas-phase H<sub>9</sub>O<sub>4</sub> + cluster**

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#### **The role of linked phospholipids in the rubber-filler interaction in carbon nanotube (CNT) filled natural rubber (NR) composites**

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#### **Rapid, Brushless Self-assembly of a PS-b-PDMS Block Copolymer for Nanolithography**

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**Global analysis of human nonreceptor tyrosine kinase specificity using high-density peptide microarrays**

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**Impact of selective catalytic reduction on exhaust particle formation over excess ammonia events**

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**A supramolecular approach to photoresponsive thermo/solvoplastic block copolymer elastomers**

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**Electromagnetic interference shielding effectiveness of MWCNT filled poly(ether sulfone) and poly(ether imide) nanocomposites**

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**Processable aromatic polyesters based on bisphenol derived from cashew nut shell liquid: synthesis and characterization**

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**DNA lesion can facilitate base ionization: Vertical ionization energies of aqueous 8-oxoguanine and its nucleoside and nucleotide**

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**Switchavidin: Reversible biotin-avidin-biotin bridges with high affinity and specificity**

Taskinen, B., Zauner, D., Lehtonen, S. I., Koskinen, M., Thomson, C., Kähkönen, N., Kukkurainen, S., Määttä, J. A. E., Ihalainen, T. O., Kulomaa, M. S., Gruber, H. J. & Hytönen, V. P., 17 Dec 2014, In : Bioconjugate Chemistry. 25, 12, p. 2233-2243 11 p.

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**Stimuli-responsive photonic polymer coatings**

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**Ballistic and numerical simulation of impacting goods on conveyor belt rubber**

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**Block co-polymers for nanolithography: Rapid microwave annealing for pattern formation on substrates**

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### **Characterisation of novel regenerated cellulosic, viscose, and cotton fibres and the dyeing properties of fabrics**

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### **Role of the bridge in photoinduced electron transfer in porphyrin-fullerene dyads**

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### **Stimuli-Responsive Materials Based on Interpenetrating Polymer Liquid Crystal Hydrogels**

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### **Van der Waals interactions are critical in Car-Parrinello molecular dynamics simulations of porphyrin-fullerene dyads**

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### **$\pi$ -Expanded $\alpha,\beta$ -unsaturated ketones: Synthesis, optical properties, and two-photon-induced polymerization**

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Hukka, J. J. & Katko, T. S., 1 Jan 2015, In : Journal American Water Works Association. 107, 1, p. E37-E46

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Reeta, P. S., Khetubol, A., Jella, T., Chukharev, V., Abou-Chahine, F., Tkachenko, N. V., Giribabu, L. & Lemmetyinen, H., 1 Jan 2015, In : Journal of Porphyrins and Phthalocyanines. 19, 1-3, p. 288-300 13 p.

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**Manipulation of polycarbonate urethane bulk properties via incorporated zwitterionic polynorborene for tissue engineering application**

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**Second-Harmonic Generation from Metal Nanoparticles: Resonance Enhancement versus Particle Geometry**

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**Kinetics of polymer looping with macromolecular crowding: Effects of volume fraction and crowder size**

Shin, J., Cherstvy, A. G. & Metzler, R., 21 Jan 2015, In : Soft Matter. 11, 3, p. 472-488 17 p.

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

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#### **Supramolecular hierarchy among halogen and hydrogen bond donors in light-induced surface patterning**

Saccone, M., Dichiarante, V., Forni, A., Goulet-Hanssens, A., Cavallo, G., Vapaavuori, J., Terraneo, G., Barrett, C. J., Resnati, G., Metrangolo, P. & Priimägi, A., 28 Jan 2015, In : *Journal of Materials Chemistry C*. 3, p. 759-768 10 p.  
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#### **Sulfonated polyetheretherketone/polypropylene polymer blends for the production of photoactive materials**

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#### **Encapsulation of secondary and tertiary ammonium salts by resorcinarenes and pyrogallarenes: The effect of size and charge concentration**

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#### **Neutralized chimeric avidin binding at a reference biosensor surface**

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#### **Polymer looping is controlled by macromolecular crowding, spatial confinement, and chain stiffness**

Shin, J., Cherstvy, A. G. & Metzler, R., 17 Feb 2015, In : *ACS Macro Letters*. 4, 2, p. 202-206 5 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

#### **Crystal structure of 2-methylpiperazine-1,4-dium bis(hydrogen maleate)**

Wecharine, I., Valkonen, A., Rzaigui, M., Sta, W. S. & Smith, G., 1 Mar 2015, In : *Acta Crystallographica Section E : Structure Reports Online*. 71, 3, p. o193-o194  
Research output: Contribution to journal > Article > Scientific > peer-review

#### **Exploring the role of stearic acid in modified zinc aluminum layered double hydroxides and their acrylonitrile butadiene rubber nanocomposites**

Eshwaran, S. B., Basu, D., Vaikuntam, S. R., Kutlu, B., Wiessner, S., Das, A., Naskar, K. & Heinrich, G., 1 Mar 2015, In : *Journal of Applied Polymer Science*. 132, 9, 41539.  
Research output: Contribution to journal > Article > Scientific > peer-review

#### **Resveratrol interferes with the aggregation of membrane-bound human-IAPP: A molecular dynamics study**

Lolicato, F., Raudino, A., Milardi, D. & La Rosa, C., 6 Mar 2015, In : *European Journal of Medicinal Chemistry*. 92, p. 876-881 6 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

#### **Synthesis, characterization and solid-state photoluminescence studies of six alkoxy phenylene ethynylene dinuclear palladium(ii) rods**

Figueira, J., Czardybon, W., Mesquita, J. C., Rodrigues, J., Lahoz, F., Russo, L., Valkonen, A. & Rissanen, K., 7 Mar 2015, In : *DALTON TRANSACTIONS*. 44, 9, p. 4003-4015 13 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

#### **New perspectives on proton pumping in cellular respiration**

Wikström, M., Sharma, V., Kaila, V. R. I., Hosler, J. P. & Hummer, G., 11 Mar 2015, In : *Chemical Reviews*. 115, 5, p. 2196-2221 26 p.  
Research output: Contribution to journal > Review Article > Scientific > peer-review

**CO oxidation catalyzed by neutral and anionic Cu<sub>20</sub> clusters: Relationship between charge and activity**

Ma, L., Melander, M., Laasonen, K. & Akola, J., 14 Mar 2015, In : Physical Chemistry Chemical Physics. 17, 10, p. 7067-7076 10 p.

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

**Oxidation of the GaAs semiconductor at the Al<sub>2</sub>O<sub>3</sub>/GaAs junction**

Tuominen, M., Yasir, M., Lång, J., Dahl, J., Kuzmin, M., Mäkelä, J., Punkkinen, M., Laukkanen, P., Kokko, K., Schulte, K., Punkkinen, R., Korpijärvi, V-M., Polojärvi, V. & Guina, M., 14 Mar 2015, In : Physical Chemistry Chemical Physics. 17, 10, p. 7060-7066 7 p.

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

**High temperature corrosion of thermally sprayed NiCr and FeCr coatings covered with a KCl-K<sub>2</sub>SO<sub>4</sub> salt mixture**

Varis, T., Bankiewicz, D., Yrjas, P., Oksa, M., Suhonen, T., Tuurna, S., Ruusuvoori, K. & Holmström, S., 15 Mar 2015, In : Surface and Coatings Technology. 265, p. 235-243 9 p.

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

**Tribology of HVOF- and HVOF-sprayed WC-10Co4Cr hardmetal coatings: A comparative assessment**

Bolelli, G., Berger, L. M., Börner, T., Koivuluoto, H., Lusvardi, L., Lyphout, C., Markocsan, N., Matikainen, V., Nylén, P., Sassatelli, P., Trache, R. & Vuoristo, P., 15 Mar 2015, In : Surface and Coatings Technology. 265, p. 125-144 20 p.

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

**Effects of fresh lubricant oils on particle emissions emitted by a modern gasoline direct injection passenger car**

Pirjola, L., Karjalainen, P., Heikkilä, J., Saari, S., Tzamkiozis, T., Ntziachristos, L., Kulmala, K., Keskinen, J. & Rönkkö, T., 17 Mar 2015, In : Environmental Science and Technology. 49, 6, p. 3644-3652 9 p.

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

**Effect of rheological properties of dissolved cellulose/microfibrillated cellulose blend suspensions on film forming**

Saarikoski, E., Rissanen, M. & Seppälä, J., 30 Mar 2015, In : Carbohydrate Polymers. 119, p. 62-70 9 p.

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

**Oxidation of cholesterol does not alter significantly its uptake into high-density lipoprotein particles**

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

**Rate constant and thermochemistry for K + O<sub>2</sub> + N<sub>2</sub> = KO<sub>2</sub> + N<sub>2</sub>**

Sorvajärvi, T., Viljanen, J., Toivonen, J., Marshall, P. & Glarborg, P., 9 Apr 2015, In : Journal of Physical Chemistry A. 119, 14, p. 3329-3336 8 p.

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**Workplace performance of a loose-fitting powered air purifying respirator during nanoparticle synthesis**

Koivisto, A. J., Aromaa, M., Koponen, I. K., Fransman, W., Jensen, K. A., Mäkelä, J. M. & Hämeri, K. J., 9 Apr 2015, In : Journal of Nanoparticle Research. 17, 4

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**Ergodicity breaking and particle spreading in noisy heterogeneous diffusion processes**

Cherstvy, A. G. & Metzler, R., 14 Apr 2015, In : Journal of Chemical Physics. 142, 14, 144105.

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**Energy degradation in photoexcited complexes of indocarbocyanine with albumin**

Kuzmin, V. A., Durandin, N. A., Lisitsyna, E. S., Litvinkova, L. V., Nekipelova, T. D., Podrugina, T. A., Matveeva, E. D., Proskurnina, M. V. & Zefirov, N. S., 1 May 2015, In : HIGH ENERGY CHEMISTRY. 49, 3, p. 211-212 2 p.

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**Multistep reactions of water with small Pd<sub>n</sub> clusters: A first principles study**

Liang, Y., Ma, L., Wang, J. & Wang, G., 1 May 2015, In : Journal of Theoretical and Computational Chemistry. 14, 3, 1550017.

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

#### **Modeling photoionization of aqueous DNA and its components**

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

**Effect of melting state on the thermal shock resistance and thermal conductivity of APS ZrO<sub>2</sub>-7.5wt.% Y<sub>2</sub>O<sub>3</sub> coatings**  
Song, X., Liu, Z., Suhonen, T., Varis, T., Huang, L., Zheng, X. & Zeng, Y., 25 May 2015, In : Surface and Coatings Technology. 270, p. 132-138 7 p.

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

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Hladílková, J., Fischer, H. E., Jungwirth, P. & Mason, P. E., 28 May 2015, In : Journal of Physical Chemistry Part B. 119, 21, p. 6357-6365 9 p.

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

#### **Spectral and kinetic characteristics of indotricarbocyanine complexation with albumin**

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#### **A facile route to synthesis of S-doped TiO<sub>2</sub> nanoparticles for photocatalytic activity**

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#### **Equipment for obtaining polymeric nanofibres by electrospinning technology: II. The obtaining of polymeric nanofibers**

Manea, L. R., Cramariuc, B., Popescu, V., Cramariuc, R., Sandu, I. & Cramariuc, O., 1 Jun 2015, In : Materiale Plastice. 52, 2, p. 180-185 6 p.

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#### **La thérapie photodynamique: État de l'art et perspectives**

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#### **Photodiagnostic et chirurgie guidés par la fluorescence**

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#### **Soft graphoepitaxy for large area directed self-assembly of polystyrene-block-poly(dimethylsiloxane) block copolymer on nanopatterned pass substrates fabricated by nanoimprint lithography**

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#### **PEGylated liposomes as carriers of hydrophobic porphyrins**

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#### **Catalytic effect of Ca and K on CO<sub>2</sub> gasification of spruce wood char**

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#### **Synthesis and Photophysical Properties of Two Diazaporphyrin-Porphyrin Hetero Dimers in Polar and Nonpolar Solutions**

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#### **A comparison of rheology and FTIR in the study of polypropylene and polystyrene photodegradation**

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Sanginés, R., Contreras, V., Sobral, H. & Robledo-Martinez, A., 6 Jul 2015, In : *Spectrochimica Acta Part B: Atomic Spectroscopy*. 110, p. 139-145 7 p., 4935.

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#### **Synthesis and study of electrochemical and optical properties of substituted perylenemonoimides in solutions and on solid surfaces**

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

Isoniemi, T., Tuukkanen, S., Cameron, D. C., Simonen, J. & Toppari, J. J., 9 Jul 2015, In : *Organic Electronics*. 25, p. 317-323 7 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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#### **Electricity production by a microbial fuel cell fueled by brewery wastewater and the factors in its membrane deterioration**

Çetinkaya, A. Y., Koroğlu, E. O., Demir, N. M., Baysoy, D. Y., Özkaya, B. & Çakmakçı, M., 20 Jul 2015, In : *Chinese Journal of Catalysis*. 36, 7, p. 1068-1076 9 p.

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#### **Photoinduced Electron Transfer in CdSe/ZnS Quantum Dot-Fullerene Hybrids**

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Bodrova, A., Chechkin, A. V., Cherstvy, A. G. & Metzler, R., 27 Jul 2015, In : Physical Chemistry Chemical Physics. 17, 34, p. 21791-21798 8 p.

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Rasappa, S., Caridad, J. M., Schulte, L., Cagliani, A., Borah, D., Morris, M. A., Bøggild, P. & Ndoni, S., 29 Jul 2015, In : RSC Advances. 5, 82, p. 66711-66717 7 p.

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### **Nonlinear Optical Properties of Fluorescent Dyes Allow for Accurate Determination of Their Molecular Orientations in Phospholipid Membranes**

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### **Responsive Polymer Photonics**

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### **Formation and stability of carbon nanotube network in natural rubber: Effect of non-rubber components**

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

### **Influence of relative humidity and physical load during storage on dustiness of inorganic nanomaterials: implications for testing and risk assessment**

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

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### **Effects of thinning and heating for TiO<sub>2</sub>/AlInP junctions**

Mäkelä, J., Tuominen, M., Yasir, M., Polojärvi, V., Aho, A., Tukiainen, A., Kuzmin, M., Punkkinen, M. P. J., Laukkanen, P., Kokko, K. & Guina, M., 24 Aug 2015, In : Journal of Electron Spectroscopy and Related Phenomena. 205, p. 6-9 4 p.

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### **Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> nanosystems by a hybrid PE-CVD/ALD approach: controllable synthesis, growth mechanism, and photocatalytic properties**

Barreca, D., Carraro, G., Warwick, M. E. A., Kaunisto, K., Gasparotto, A., Gombac, V., Sada, C., Turner, S., Van Tendeloo, G., Maccato, C. & Fornasiero, P., 28 Aug 2015, In : CrystEngComm. 17, 32, p. 6219-6226 8 p.

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#### **How large are nonadiabatic effects in atomic and diatomic systems?**

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#### **Searching for a robust strategy for minimizing alkali chlorides in fluidized bed boilers during burning of high SRF-energy-share fuel**

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#### **Measuring synthesis yield in graphene oxide synthesis by modified hummers method**

Frankberg, E. J., George, L., Efimov, A., Honkanen, M., Pessi, J. & Levänen, E., 2 Sep 2015, In : Fullerenes Nanotubes and Carbon Nanostructures. 23, 9, p. 755-759 5 p.

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#### **Molecular Design of Light-Responsive Hydrogels, for in Situ Generation of Fast and Reversible Valves for Microfluidic Applications**

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#### **Effect of spraying parameters on the microstructural and corrosion properties of HVOF-sprayed Fe-Cr-Ni-B-C coatings**

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

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#### **PIP2 and Talin Join Forces to Activate Integrin**

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#### **Atomic-level characterization of transport cycle thermodynamics in the glycerol-3-phosphate: Phosphate antiporter**

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#### **Production of sulfonated polyetheretherketone/polypropylene fibers for photoactive textiles**

Mylläri, V., Fatarella, E., Ruzzante, M., Pogni, R., Baratto, M. C., Skrifvars, M., Syrjäälä, S. & Järvelä, P., 1 Oct 2015, In : Journal of Applied Polymer Science. 132, 39, 42595.

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### **Photomechanical Energy Transfer to Photopassive Polymers through Hydrogen and Halogen Bonds**

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### **Comparison of different cationized proteins as biomaterials for nanoparticle-based ocular gene delivery**

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### **Effect of rubber polarity on selective wetting of carbon nanotubes in ternary blends**

Le, H. H., Parsaker, M., Sriharish, M. N., Henning, S., Menzel, M., Wießner, S., Das, A., Do, Q. K., Heinrich, G. & Radosch, H. J., 1 Nov 2015, In : Express Polymer Letters. 9, 11, p. 960-971 12 p.  
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Seo, J. Y., Lee, K., Ramasamy, P., Kim, B., Lee, S. Y., Oh, Y. K. & Park, S. B., 5 Nov 2015, In : Chemical Engineering Journal. 280, p. 206-214 9 p.  
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### **Graphene-intercalated Fe<sub>2</sub>O<sub>3</sub>/TiO<sub>2</sub> heterojunctions for efficient photoelectrolysis of water**

Kaouk, A., Ruoko, T. P., Gönüllü, Y., Kaunisto, K., Mettenböcker, A., Gurevich, E., Lemmetyinen, H., Ostendorf, A. & Mathur, S., 13 Nov 2015, In : RSC Advances. 5, 123, p. 101401-101407 7 p.  
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### **Differential basal-to-apical accessibility of lamin A/C epitopes in the nuclear lamina regulated by changes in cytoskeletal tension**

Ihalainen, T. O., Aires, L., Herzog, F. A., Schwartlander, R., Moeller, J. & Vogel, V., 1 Dec 2015, In : Nature Materials. 14, 12, p. 1252-1261 10 p.  
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Research output: Contribution to journal > Article > Scientific > peer-review

### **Synthesis, crystal structure, physico-chemical characterization and dielectric properties of a new hybrid material, 1-Ethylpiperazine-1,4-dium tetrachlorocadmate**

Dhieb, A. C., Valkonen, A., Rzaigui, M. & Smirani, W., 15 Dec 2015, In : Journal of Molecular Structure. 1102, p. 50-56 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

### **The formation and physical properties of the particle emissions from a natural gas engine**

Alanen, J., Saukko, E., Lehtoranta, K., Murtonen, T., Timonen, H., Hillamo, R., Karjalainen, P., Kuuluvainen, H., Harra, J., Keskinen, J. & Rönkkö, T., 15 Dec 2015, In : Fuel. 162, p. 155-161 7 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Farooq, A., Evreinov, G., Raisamo, R. & Takahata, D., 31 Dec 2015, *2015 IEEE SENSORS - Proceedings*. Institute of Electrical and Electronics Engineers Inc., 7370186

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

**Inkjet-printed dual microfluidic-based sensor integrated system**

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

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

**Alginate microgels created by selective coalescence between core drops paired with an ultrathin shell**

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

**A Three-Component Assembly Promoted by Boronic Acids Delivers a Modular Fluorophore Platform (BASHY Dyes)**

Santos, F. M. F., Rosa, J. N., Candeias, N. R., Carvalho, C. P., Matos, A. I., Ventura, A. E., Florindo, H. F., Silva, L. C., Pischel, U. & Gois, P. M. P., 2016, In : *Chemistry: A European Journal*. 22, 5, p. 1631-1637

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

**Cholesterol oxidation products and their biological importance**

Kulig, W., Cwiklik, L., Jurkiewicz, P., Rog, T. & Vattulainen, I., 2016, In : *Chemistry and Physics of Lipids*. 199, p. 144-160 17 p.

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

**Compatibilization of natural rubber/nitrile rubber blends by sol-gel nano-silica generated by in situ method**

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

**Controllable Electronic Structures and Photoinduced Processes of Bay-Linked Perylenediimide Dimers and a Ferrocene-Linked Triad**

Horinouchi, H., Sakai, H., Araki, Y., Sakanoue, T., Takenobu, T., Wada, T., Tkachenko, N. V. & Hasobe, T., 2016, In : *Chemistry: A European Journal*. 22, 28, p. 9631-9641

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

**Decoding the Morphological Diversity in Two Dimensional Crystalline Porous Polymers by Core Planarity Modulation**

Halder, A., Kandambeth, S., Biswal, B. P., Kaur, G., Roy, N. C., Addicoat, M., Salunke, J. K., Banerjee, S., Vanka, K., Heine, T., Verma, S. & Banerjee, R., 2016, In : *Angewandte Chemie (International Edition)*. 55, 27, p. 7806-7810 5 p.

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

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

**Fire-safe and environmentally friendly nanocomposites based on layered double hydroxides and ethylene propylene diene elastomer**

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

**Heat capacities of crystalline and glassy lithium metaphosphate up to the transition region**

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

**High-Yield Excited Triplet States in Pentacene Self-Assembled Monolayers on Gold Nanoparticles through Singlet Exciton Fission**

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

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**Nonlinear transmittance and optical power limiting in magnesium ferrite nanoparticles: effects of laser pulsewidth and particle size**

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**On describing the optoelectronic characteristics of poly(benzodithiophene-: Co -quinoxaline)-fullerene complexes: The influence of optimally tuned density functionals**

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

**Optical non-contact pH measurement in cell culture with sterilizable, modular parts**

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

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**Preferential adsorption of Cu in a multi-metal mixture onto biogenic elemental selenium nanoparticles**

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

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**Phenothiazine and carbazole substituted pyrene based electroluminescent organic semiconductors for OLED devices**

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**Long-Lived Triplet Excited States of Bent-Shaped Pentacene Dimers by Intramolecular Singlet Fission**

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**Microwave assisted laser-induced breakdown spectroscopy at ambient conditions**

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### **Coordination networks incorporating halogen-bond donor sites and azobenzene groups**

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### **Influence of heat treatment on the abrasive wear resistance of a $\text{Cr}_3\text{C}_2\text{NiCr}$ coating deposited by an ethene-fuelled HVOF spray process**

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### **Optical Projection Tomography Technique for Image Texture and Mass Transport Studies in Hydrogels Based on Gellan Gum**

Soto, A. M., Koivisto, J. T., Parraga, J. E., Silva-Correia, J., Oliveira, J. M., Reis, R. L., Kellomäki, M., Hyttinen, J. & Figueiras, E., 24 May 2016, In : Langmuir. 32, 20, p. 5173-5182 10 p.  
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### **Spontaneous formation of three-dimensionally ordered Bi-rich nanostructures within $\text{GaAs}_{1-x}\text{Bi}_x$ /GaAs quantum wells**

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### **The Influence of Phosphorus Exposure on a Natural-Gas-Oxidation Catalyst**

Kärkkäinen, M., Kolli, T., Honkanen, M., Heikkinen, O., Väliheikki, A., Huuhtanen, M., Kallinen, K., Lahtinen, J., Vippola, M. & Keiski, R. L., 1 Jul 2016, In : *Topics in Catalysis*. 59, 10-12, p. 1044-1048 5 p.

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### **Reinforced chloroprene rubber by in situ generated silica particles: Evidence of bound rubber on the silica surface**

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### **3D micro-nano structured hybrid scaffolds: An investigation into the role of nanofiber coating on viability, proliferation and differentiation of seeded mesenchymal stem cells**

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### **Polyarginine Interacts More Strongly and Cooperatively than Polylysine with Phospholipid Bilayers**

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### **Increased survival rate by local release of diclofenac in a murine model of recurrent oral carcinoma**

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**Grain orientation dependent Nb-Ti microalloying mediated surface segregation on ferritic stainless steel**

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**UPS and DFT investigation of the electronic structure of gas-phase trimesic acid**

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**Improvement of actuation performance of dielectric elastomers by barium titanate and carbon black fillers**

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

**Optimization of HVOF Cr<sub>3</sub>C<sub>2</sub>-NiCr coating for increased fatigue performance**

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**Particle emissions characterization from a medium-speed marine diesel engine with two fuels at different sampling conditions**

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**Crystallization and sintering of borosilicate bioactive glasses for application in tissue engineering**

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**Design of a 25 MWe Solar Thermal Power Plant in Iran with Using Parabolic Trough Collectors and a Two-Tank Molten Salt Storage System**

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**Effects of orientation at the phthalocyanine-CdSe interface on the electron transfer characteristics**

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**Fluorescence spectroscopy "knife" for polyplex "cakes": taste the filling**

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

**Improved corrosion properties of Hot Dip Galvanized Steel by nanomolecular silane layers as hybrid interface between zinc and top coatings**

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**Liquid flame spray—a hydrogen-oxygen flame based method for nanoparticle synthesis and functional nanocoatings**

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

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**Photoresponsive ionic liquid crystals assembled: Via halogen bond: En route towards light-controllable ion transporters**

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**Supramolecular control of liquid crystals by doping with halogen-bonding dyes**

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

**Two cations, two mechanisms: Interactions of sodium and calcium with zwitterionic lipid membranes**

Javanainen, M., Melcrová, A., Magarkar, A., Jurkiewicz, P., Hof, M., Jungwirth, P. & Martinez-Seara, H., 2017, In : Chemical Communications. 53, 39, p. 5380-5383 4 p.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Architectures and codecs for real-time light field streaming**

Kovács, P. T., Zare, A., Balogh, T., Bregovic, R. & Gotchev, A., 1 Jan 2017, In : Journal of Imaging Science and Technology. 61, 1, 010403.  
Research output: Contribution to journal > Article > Scientific > peer-review

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

Suokas, E., 1 Jan 2017, *16th TAPPI European PLACE Conference 2017*. TAPPI Press, p. 529-544 16 p.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Novel bio-based materials for active and intelligent packaging**

Lahti, J., Kamppuri, T. & Kuusipalo, J., 1 Jan 2017, *16th TAPPI European PLACE Conference 2017*. TAPPI Press, 1 p.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Novel equipment to simulate hot air heat sealability of packaging materials**

Lahti, J., Kuusipalo, J. & Auvinen, S., 1 Jan 2017, *16th TAPPI European PLACE Conference 2017*. TAPPI Press, p. 237-248 12 p.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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

Kuusipalo, J. & Lahti, J., 1 Jan 2017, *16th TAPPI European PLACE Conference 2017: Basel; Switzerland; 22 May 2017 through 24 May 2017*. TAPPI Press, Vol. May-2017. 1 p.

### **Polarization resolved photoluminescence in GaAs<sub>1-x</sub>Bi<sub>x</sub>/GaAs quantum wells**

Balanta, M. A. G., Orsi Gordo, V., Carvalho, A. R. H., Puustinen, J., Alghamdi, H. M., Henini, M., Galeti, H. V. A., Guina, M. & Galvão Gobato, Y., Feb 2017, In : Journal of Luminescence. 182, p. 49-52 4 p.

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

### **Benchmarking DFT methods with small basis sets for the calculation of halogen-bond strengths**

Siiskonen, A. & Priimägi, A., 1 Feb 2017, In : Journal of Molecular Modeling. 23, 2, 50.

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

### **Magnetic routing of light-induced waveguides**

Izdebskaya, Y., Shvedov, V., Assanto, G. & Krolikowski, W., 15 Feb 2017, In : Nature Communications. 8, 14452.

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

### **Membrane cholesterol access into a G-protein-coupled receptor**

Guixà-González, R., Albasanz, J. L., Rodriguez-Espigares, I., Pastor, M., Sanz, F., Martí-Solano, M., Manna, M., Martínez-Seara, H., Hildebrand, P. W., Martín, M. & Selent, J., 21 Feb 2017, In : Nature Communications. 8, 14505.

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

### **Hierarchical Self-Assembly of Halogen-Bonded Block Copolymer Complexes into Upright Cylindrical Domains**

Milani, R., Houbenov, N., Fernandez-Palacio, F., Cavallo, G., Luzio, A., Haataja, J., Giancane, G., Saccone, M., Priimägi, A., Metrangolo, P. & Ikkala, O., 9 Mar 2017, In : Chem. 2, 3, p. 417-426 10 p.

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

### **Calcium Directly Regulates Phosphatidylinositol 4,5-Bisphosphate Headgroup Conformation and Recognition**

Bilkova, E., Pleskot, R., Rissanen, S., Sun, S., Czogalla, A., Cwiklik, L., Róg, T., Vattulainen, I., Cremer, P. S., Jungwirth, P. & Coskun, Ü., 22 Mar 2017, In : Journal of the American Chemical Society. 139, 11, p. 4019-4024 6 p.

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

### **Hexaphyrin as a Potential Theranostic Dye for Photothermal Therapy and <sup>19</sup>F Magnetic Resonance Imaging**

Higashino, T., Nakatsuji, H., Fukuda, R., Okamoto, H., Imai, H., Matsuda, T., Tochio, H., Shirakawa, M., Tkachenko, N. V., Hashida, M., Murakami, T. & Imahori, H., 24 Mar 2017, In : ChemBioChem. 18, 10, p. 951-959 9 p.

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

### **Elucidation of Compression-Induced Surface Crystallization in Amorphous Tablets Using Sum Frequency Generation (SFG) Microscopy**

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

### **Electron microscopic studies of natural gas oxidation catalyst – Effects of thermally accelerated aging on catalyst microstructure**

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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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Jones, R. O., Ahlstedt, O., Akola, J. & Ropo, M., 21 May 2017, In : Journal of Chemical Physics. 146, 19, 194502.

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

### **Catalytic Activity of AuCu Clusters on MgO(100): Effect of Alloy Composition for CO Oxidation**

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

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**Composition and role of the attached and planktonic microbial communities in mesophilic and thermophilic xylose-fed microbial fuel cells**

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**Convenient extraction method for quantification of thin zinc patina layers**

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

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**Gloriosa superba Mediated Synthesis of Platinum and Palladium Nanoparticles for Induction of Apoptosis in Breast Cancer**

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**Upconversion from fluorophosphate glasses prepared with NaYF<sub>4</sub>:Er<sup>3+</sup>, Yb<sup>3+</sup> nanocrystals**

Ojha, N., Tuomisto, M., Lastusaari, M. & Petit, L., 1 Jan 2018, In : *RSC Advances*. 8, 34, p. 19226-19236 11 p.  
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**Temperature scanning stress relaxation of an autonomous self-healing elastomer containing non-covalent reversible network junctions**

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**Pot-economy autooxidative condensation of 2-Aryl-2-lithio-1,3-dithianes**

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**Improved Stability of Atomic Layer Deposited Amorphous TiO<sub>2</sub> Photoelectrode Coatings by Thermally Induced Oxygen Defects**

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**Improving the high temperature abrasion resistance of thermally sprayed Cr<sub>3</sub>C<sub>2</sub>-NiCr coatings by WC addition**

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**Composite Hydrogels Using Bioinspired Approach with in Situ Fast Gelation and Self-Healing Ability as Future Injectable Biomaterial**

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**Membrane bound COMT isoform is an interfacial enzyme: General mechanism and new drug design paradigm**

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**Accurate Binding of Sodium and Calcium to a POPC Bilayer by Effective Inclusion of Electronic Polarization**

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**Characteristics of nFOG, an aerosol-based wet thin film coating technique**

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#### **Free amino acids and 5'-nucleotides in Finnish forest mushrooms**

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#### **Wet etching of dilute nitride GaInNAs, GaInNAsSb, and GaNAsSb alloys lattice-matched to GaAs**

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#### **A Ceramide-Regulated Element in the Late Endosomal Protein LAPT4B Controls Amino Acid Transporter Interaction**

Zhou, K., Dichlberger, A., Martinez-Seara, H., Nyholm, T. K. M., Li, S., Kim, Y. A., Vattulainen, I., Ikonen, E. & Blom, T., 23 May 2018, In : ACS Central Science. 4, 5, p. 548-558 11 p.

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#### **High Bending-Mode Sensitivity of Printed Piezoelectric Poly(vinylidene fluoride- co-trifluoroethylene) Sensors**

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

**Design aspects of all atomic layer deposited TiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub> scaffold-absorber photoanodes for water splitting**

Hiltunen, A., Ruoko, T-P., Iivonen, T., Lahtonen, K., Ali-Löytty, H., Sarlin, E., Valden, M., Leskelä, M. & Tkachenko, N., 31 Jul 2018, In : Sustainable Energy & Fuels. 2, 9, p. 2124-2130

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**Selenate removal in biofilm systems: Effect of nitrate and sulfate on selenium removal efficiency, biofilm structure and microbial community**

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**A compact olfactometer for IMS measurements and testing human perception**

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**Effects of pyrolysis temperature on the hydrologically relevant porosity of willow biochar**

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**Mechanical, thermal, and burning properties of viscose fabric composites: Influence of epoxy resin modification**

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**Biological treatment of selenium-laden wastewater containing nitrate and sulfate in an upflow anaerobic sludge bed reactor at pH 5.0**

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**Tribocorrosion behaviour of aluminium bronze in 3.5 wt.% NaCl solution**

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#### **Metabolic profiling of water-soluble compounds from the extracts of dark septate endophytic fungi (DSE) isolated from scots pine (*Pinus sylvestris* L.) seedlings using UPLC–orbitrap–MS**

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#### **Multiphoton Excitation of CsPbBr<sub>3</sub> Perovskite Quantum Dots (PQDs): How Many Electrons Can One PQD Donate to Multiple Molecular Acceptors?**

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#### **Possible strategy to use differential mobility spectrometry in real time applications**

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#### **Synthesis of 6,12-disubstituted methanodibenzo[b,f][1,5]dioxocins: Pyrrolidine catalyzed self-condensation of 2'-Hydroxyacetophenones**

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**Temperature scanning stress relaxation behavior of water responsive and mechanically adaptive elastomer nanocomposites**

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**The Hosoya entropy of graphs revisited**

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**The maximum Hosoya index of unicyclic graphs with diameter at most four**

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**Tuning of nonlinear absorption in highly luminescent CdSe based quantum dots with core-shell and core/multi-shell architectures**

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**A Pentacene-based Nanotube Displaying Enriched Electrochemical and Photochemical Activities**

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**Charge carrier dynamics in tantalum oxide overlayered and tantalum doped hematite photoanodes**

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