

### **Rapid growth of new atmospheric particles by nitric acid and ammonia condensation**

Wang, M., Kong, W., Marten, R., He, X. C., Chen, D., Pfeifer, J., Heitto, A., Kontkanen, J., Dada, L., Kürten, A., Yli-Juuti, T., Manninen, H. E., Amanatidis, S., Amorim, A., Baalbaki, R., Baccarini, A., Bell, D. M., Bertozzi, B., Bräkling, S., Brilke, S., Murillo, L. C., Chiu, R., Chu, B., De Menezes, L. P., Duplissy, J., Finkenzeller, H., Carracedo, L. G., Granzin, M., Guida, R., Hansel, A., Hofbauer, V., Krechmer, J., Lehtipalo, K., Lamkaddam, H., Lampimäki, M., Lee, C. P., Makhmutov, V., Marie, G., Mathot, S., Mauldin, R. L., Mentler, B., Müller, T., Onnela, A., Partoll, E., Petäjä, T., Philippov, M., Pospisilova, V., Ranjithkumar, A., Rissanen, M., Rörup, B., Scholz, W., Shen, J., Simon, M., Sipilä, M., Steiner, G., Stolzenburg, D., Tham, Y. J., Tomé, A., Wagner, A. C., Wang, D. S., Wang, Y., Weber, S. K., Winkler, P. M., Wlasits, P. J., Wu, Y., Xiao, M., Ye, Q., Zauner-Wieczorek, M., Zhou, X., Volkamer, R., Riipinen, I., Dommen, J., Curtius, J., Baltensperger, U., Kulmala, M., Worsnop, D. R., Kirkby, J., Seinfeld, J. H., El-Haddad, I., Flagan, R. C. & Donahue, N. M., 14 May 2020, In : *Nature*. 581, 7807, p. 184-189 6 p.

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

### **Bioinspired underwater locomotion of light-driven liquid crystal gels**

Shahsavan, H., Aghakhani, A., Zeng, H., Guo, Y., Davidson, Z. S., Priimägi, A. & Sitti, M., 10 Mar 2020, In : *Proceedings of the National Academy of Sciences of the United States of America*. 117, 10, p. 5125-5133 9 p.

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

### **Mechanism of homodimeric cytokine receptor activation and dysregulation by oncogenic mutations**

Wilmes, S., Hafer, M., Vuorio, J., Tucker, J. A., Winkelmann, H., Löchte, S., Stanly, T. A., Pulgar Prieto, K. D., Poojari, C., Sharma, V., Richter, C. P., Kurre, R., Hubbard, S. R., Christopher Garcia, K., Moraga, I., Vattulainen, I., Hitchcock, I. S. & Piehler, J., 7 Feb 2020, In : *Science*. 367, 6478, p. 643-652 10 p.

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

### **Three-Dimensional Printing of the Nasal Cavities for Clinical Experiments**

Valtonen, O., Ormiskangas, J., Kivekäs, I., Rantanen, V., Dean, M., Poe, D., Järnstedt, J., Lekkala, J., Saarenrinne, P. & Rautiainen, M., 16 Jan 2020, In : *Scientific Reports*. 10, 7 p., 502.

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

### **Automatic Posture and Movement Tracking of Infants with Wearable Movement Sensors**

Airaksinen, M., Räsänen, O., Ilén, E., Häyrynen, T., Kivi, A., Marchi, V., Gallen, A., Blom, S., Varhe, A., Kaartinen, N., Haataja, L. & Vanhatalo, S., 13 Jan 2020, In : *Scientific Reports*. 10, 1, 13 p., 169.

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

### **Azobenzene-based sinusoidal surface topography drives focal adhesion confinement and guides collective migration of epithelial cells**

Fedele, C., Mäntylä, E., Belardi, B., Hamkins-Indik, T., Cavalli, S., Netti, P. A., Fletcher, D. A., Nymark, S., Priimägi, A. & Ihalainen, T. O., 2020, In : *Scientific Reports*. 10, 1, 15 p., 15329.

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

### **Combining deep learning with token selection for patient phenotyping from electronic health records**

Yang, Z., Dehmer, M., Yli-Harja, O. & Emmert-Streib, F., 2020, In : *Scientific Reports*. 10, 1, 18 p., 1432.

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

### **Dynamical heart beat correlations during running**

Molkkari, M., Angelotti, G., Emig, T. & Räsänen, E., 2020, In : *Scientific Reports*. 10, 1, 9 p., 13627.

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

### **Machine learning analysis of rogue solitons in supercontinuum generation**

Salmela, L., Lapre, C., Dudley, J. M. & Genty, G., 2020, In : *Scientific Reports*. 10, 9596.

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

### **Mechanically driven strategies to improve electromechanical behaviour of printed stretchable electronic systems**

Di Vito, D., Mosallaei, M., Khorramdel, B., Kanerva, M. & Mäntysalo, M., 2020, In : *Scientific Reports*. 10, 1, 11 p., 12037.

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

**Parkinson's disease detection from 20-step walking tests using inertial sensors of a smartphone: Machine learning approach based on an observational case-control study**

Juutinen, M., Wang, C., Zhu, J., Haladjian, J., Ruokolainen, J., Puustinen, J. & Vehkaoja, A., 2020, In : PLoS ONE. 15, 7, 19 p., e0236258.

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

**Skin-conformable printed supercapacitors and their performance in wear**

Railanmaa, A., Soltani, A., Lehtimäki, S., Pournoori, N., Keskinen, J., Hokka, M. & Lupo, D., 2020, In : Scientific Reports. 10, 1, 9 p., 15194.

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

**X-ray microtomography is a novel method for accurate evaluation of small-bowel mucosal morphology and surface area**

Virta, J., Hannula, M., Tamminen, I., Lindfors, K., Kaukinen, K., Popp, A., Taavela, J., Saavalainen, P., Hiltunen, P., Hyttinen, J. & Kurppa, K., 2020, In : Scientific Reports. 10, 1, 11 p., 13164.

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

**Changes in hemodynamics associated with metabolic syndrome are more pronounced in women than in men**

Kangas, P., Tikkakoski, A., Kettunen, J., Eräranta, A., Huhtala, H., Kähönen, M., Sipilä, K., Mustonen, J. & Pörsti, I., 5 Dec 2019, In : Scientific Reports. 9, 1, 11 p., 18377.

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

**Automatic classification of IgA endomysial antibody test for celiac disease: a new method deploying machine learning**

Caetano dos Santos, F. L., Michalek, I. M., Laurila, K., Kaukinen, K., Hyttinen, J. & Lindfors, K., 1 Dec 2019, In : Scientific Reports. 9, 1, 9217.

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

**Genetic similarity of biological samples to counter bio-hacking of DNA-sequencing functionality**

Islam, M. S., Ivanov, S., Robson, E., Dooley-Cullinane, T., Coffey, L., Doolin, K. & Balasubramaniam, S., 1 Dec 2019, In : Scientific Reports. 9, 1, 8684.

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

**Multimodal Machine Learning-based Knee Osteoarthritis Progression Prediction from Plain Radiographs and Clinical Data**

Tiulpin, A., Klein, S., Bierma-Zeinstra, S. M. A., Thevenot, J., Rahtu, E., Meurs, J. V., Oei, E. H. G. & Saarakkala, S., 1 Dec 2019, In : Scientific Reports. 9, 1, 20038.

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

**Aerosol gas exchange system (AGES) for nanoparticle sampling at elevated temperatures: Modeling and experimental characterization**

Bainschab, M., Martikainen, S., Keskinen, J., Bergmann, A. & Karjalainen, P., 20 Nov 2019, In : Scientific Reports. 9, 1, 12 p., 17149.

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

**Highly ductile amorphous oxide at room temperature and high strain rate**

Frankberg, E. J., Kalikka, J., Ferré, F. G., Joly-Pottuz, L., Salminen, T., Hintikka, J., Hokka, M., Koneti, S., Douillard, T., Le Saint, B., Kreiml, P., Cordill, M. J., Epicier, T., Stauffer, D., Vanazzi, M., Roiban, L., Akola, J., Fonzo, F. D., Levänen, E. & Masenelli-Varlot, K., 15 Nov 2019, In : Science. 366, 6467, p. 864-869 6 p.

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

**Automatization and stress analysis data of CoCr laser weld fatigue tests**

Kanerva, M., Besharat, Z., Pärnänen, T., Jokinen, J., Honkanen, M., Sarlin, E., Göthelid, M. & Schlenzka, D., 1 Oct 2019, In : Data in Brief. 26, 104374.

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

**DroneRF dataset: A dataset of drones for RF-based detection, classification and identification**

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

### **Non-toxic printed supercapacitors operating in sub-zero conditions**

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

### **Real-time characterization of spectral instabilities in a mode-locked fibre laser exhibiting soliton-similariton dynamics**

Lapre, C., Billet, C., Meng, F., Ryczkowski, P., Sylvestre, T., Finot, C., Genty, G. & Dudley, J. M., 27 Sep 2019, In : Scientific Reports. 9, 1

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

### **Gaussian Light Model in Brightfield Optical Projection Tomography**

Koskela, O., Montonen, T., Belay, B., Figueiras, E., Pursiainen, S. & Hyttinen, J., 26 Sep 2019, In : Scientific Reports. 9, 1

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### **Scaling and correlation properties of RR and QT intervals at the cellular level**

Kim, J., Shah, D., Potapov, I., Latukka, J., Aalto-Setälä, K. & Räsänen, E., 2019, In : Scientific Reports. 9, 1, 3651.

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

### **Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors**

Lehtipalo, K., Yan, C., Dada, L., Bianchi, F., Xiao, M., Wagner, R., Stolzenburg, D., Ahonen, L. R., Amorim, A., Baccarini, A., Bauer, P. S., Baumgartner, B., Bergen, A., Bernhammer, A. K., Breitenlechner, M., Brilke, S., Buchholz, A., Mazon, S. B., Chen, D., Chen, X., Dias, A., Dommen, J., Draper, D. C., Duplissy, J., Ehn, M., Finkenzeller, H., Fischer, L., Frege, C., Fuchs, C., Garmash, O., Gordon, H., Hakala, J., He, X., Heikkinen, L., Heinritzi, M., Helm, J. C., Hofbauer, V., Hoyle, C. R., Jokinen, T., Kangasluoma, J., Kerminen, V. M., Kim, C., Kirkby, J., Kontkanen, J., Kürten, A., Lawler, M. J., Mai, H., Mathot, S., Nieminen, T. & Virtanen, A., 12 Dec 2018, In : Science Advances. 4, 12, eaau5363.

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

### **An Optical Method for the In-Vivo Characterization of the Biomechanical Response of the Right Ventricle**

Soltani, A., Lahti, J., Järvelä, K., Curtze, S., Laurikka, J., Hokka, M. & Kuokkala, V. T., 1 Dec 2018, In : Scientific Reports. 8, 1, 6831.

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

### **Automatic knee osteoarthritis diagnosis from plain radiographs: A deep learning-based approach**

Tiulpin, A., Thevenot, J., Rahtu, E., Lehenkari, P. & Saarakkala, S., 1 Dec 2018, In : Scientific Reports. 8, 1, 1727.

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

### **Glucosylceramide modifies the LPS-induced inflammatory response in macrophages and the orientation of the LPS/TLR4 complex in silico**

Mobarak, E., Håversen, L., Manna, M., Rutberg, M., Levin, M., Perkins, R., Rog, T., Vattulainen, I. & Borén, J., 1 Dec 2018, In : Scientific Reports. 8, 1, 13600.

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

### **Highly-Sensitive Refractive Index Sensing by Near-infrared Metatronic Nanocircuits**

Rashed, A. R., Gudulluoglu, B., Yun, H. W., Habib, M., Boyaci, I. H., Hong, S. H., Ozbay, E. & Caglayan, H., 1 Dec 2018, In : Scientific Reports. 8, 1, 11457.

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

### **Information transfer in QT-RR dynamics: Application to QT-correction**

Potapov, I., Latukka, J., Kim, J., Luukko, P., Aalto-Setälä, K. & Räsänen, E., 1 Dec 2018, In : Scientific Reports. 8, 1, 9 p., 14992.

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

### **In vitro Evaluation of Porous borosilicate, borophosphate and phosphate Bioactive Glasses Scaffolds fabricated using Foaming Agent for Bone Regeneration**

Erasmus, E. P., Sule, R., Johnson, O. T., Massera, J. & Sigalas, I., 1 Dec 2018, In : Scientific Reports. 8, 1, 3699.

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

### **Multilayer Aggregation with Statistical Validation: Application to Investor Networks**

Baltakys, K., Kannainen, J. & Emmert-Streib, F., 1 Dec 2018, In : Scientific Reports. 8, 1, 8198.

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

### **Added value of autoregulation and multi-step kinetics of transcription initiation**

Prajapat, M. K. & Ribeiro, A. S., 1 Nov 2018, In : Royal Society Open Science. 5, 11, 181170.

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

### **Redox-coupled quinone dynamics in the respiratory complex I**

Warnau, J., Sharma, V., Gamiz-Hernandez, A. P., Luca, A. D., Haapanen, O., Vattulainen, I., Wikström, M., Hummer, G. & Kaila, V. R. I., 4 Sep 2018, In : Proceedings of the National Academy of Sciences of the United States of America. 115, 36, p. E8413-E8420

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

### **Optimized dispersion quality of aqueous carbon nanotube colloids as a function of sonochemical yield and surfactant/CNT ratio**

Keinänen, P., Siljander, S., Koivula, M., Sethi, J., Sarlin, E., Vuorinen, J. & Kanerva, M., 1 Sep 2018, In : Heliyon. 4, 9, 15 p., e00787.

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

### **Porous poly-L-lactide-co-1-caprolactone scaffold: A novel biomaterial for vaginal tissue engineering**

Sartoneva, R., Kuismanen, K., Juntunen, M., Karjalainen, S., Hannula, M., Kyllönen, L., Hyttinen, J., Huhtala, H., Paakinaho, K. & Miettinen, S., 1 Aug 2018, In : Royal Society Open Science. 5, 8, 180811.

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

### **Comparison of electron injection and recombination on TiO<sub>2</sub> nanoparticles and ZnO nanorods photosensitized by phthalocyanine**

Virkki, K., Tervola, E., Ince, M., Torres, T. & Tkachenko, N. V., 11 Jul 2018, In : Royal Society Open Science. 5, 7, 180323.

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

### **Ricci-flow based conformal mapping of the proximal femur to identify exercise loading effects**

Narra, N., Abe, S., Dimitrov, V., Nikander, R., Kouhia, R., Sievänen, H. & Hyttinen, J., 2018, In : Scientific Reports. 8, 1, 4823.

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

### **Sub-parts-per-trillion level sensitivity in trace gas detection by cantilever-enhanced photo-acoustic spectroscopy**

Tomberg, T., Vainio, M., Hieta, T. & Halonen, L., 2018, In : Scientific Reports. 8, 1, 1848.

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

### **Speeding up crystallization**

Akola, J. & Jones, R. O., 15 Dec 2017, In : Science. 358, 6369, p. 1386 1 p.

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

### **Chromatin organization regulates viral egress dynamics**

Aho, V., Myllys, M., Ruokolainen, V., Hakanen, S., Mäntylä, E., Virtanen, J., Hukkanen, V., Kühn, T., Timonen, J., Mattila, K., Larabell, C. A. & Vihinen-Ranta, M., 1 Dec 2017, In : Scientific Reports. 7, 1, 3692.

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

### **Curved optical solitons subject to transverse acceleration in reorientational soft matter**

Laudyn, U. A., Kwaśny, M., Sala, F. A., Karpierz, M. A., Smyth, N. F. & Assanto, G., 1 Dec 2017, In : Scientific Reports. 7, 1, 12385.

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

### **Effects of Sintering Temperature on Crystallization and Fabrication of Porous Bioactive Glass Scaffolds for Bone Regeneration**

Erasmus, E. P., Johnson, O. T., Sigalas, I. & Massera, J., 1 Dec 2017, In : Scientific Reports. 7, 1, 6046.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Molecular mechanisms of Charcot-Marie-Tooth neuropathy linked to mutations in human myelin protein P2**

Ruskamo, S., Nieminen, T., Kristiansen, C. K., Vatne, G. H., Baumann, A., Hallin, E. I., Raasakka, A., Joensuu, P., Bergmann, U., Vattulainen, I. & Kursula, P., 1 Dec 2017, In : Scientific Reports. 7, 1, 6510.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Personalized Monitoring and Advance Warning System for Cardiac Arrhythmias**

Kiranyaz, S., Ince, T. & Gabbouj, M., 1 Dec 2017, In : Scientific Reports. 7, 1, 9270.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Rate-limiting steps in transcription dictate sensitivity to variability in cellular components**

Mäkelä, J., Kandavalli, V. & Ribeiro, A. S., 1 Dec 2017, In : Scientific Reports. 7, 1, 10588.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Sensitivity enhancement of flexible gas sensors via conversion of inkjet-printed silver electrodes into porous gold counterparts**

Fang, Y., Akbari, M., Sydänheimo, L., Ukkonen, L. & Tentzeris, M. M., 1 Dec 2017, In : Scientific Reports. 7, 1, 8988.  
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### **Mechanistic principles underlying regulation of the actin cytoskeleton by phosphoinositides**

Senju, Y., Kalimeri, M., Koskela, E. V., Somerharju, P., Zhao, H., Vattulainen, I. & Lappalainen, P., 24 Oct 2017, In : Proceedings of the National Academy of Sciences of the United States of America. 114, 43, p. E8977-E8986  
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### **Traffic is a major source of atmospheric nanocluster aerosol**

Rönkkö, T., Kuuluvainen, H., Karjalainen, P., Keskinen, J., Hillamo, R., Niemi, J. V., Pirjola, L., Timonen, H. J., Saarikoski, S., Saukko, E., Järvinen, A., Silvennoinen, H., Rostedt, A., Olin, M., Yli-Ojanperä, J., Nousiainen, P., Kousa, A. & Dal Maso, M., 18 Jul 2017, In : Proceedings of the National Academy of Sciences of the United States of America. 114, 29, p. 7549-7554 6 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Väitöstilaisuus yliopiston imagonluojana**

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Research output: Contribution to journal › Comment/debate › Scientific

### **Analysis of spatial heterogeneity in normal epithelium and preneoplastic alterations in mouse prostate tumor models**

Valkonen, M., Ruusuvoori, P., Kartasalo, K., Nykter, M., Visakorpi, T. & Latonen, L., 20 Mar 2017, In : Scientific Reports. 7, 44831.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Infiltrated bunch of solitons in Bi-doped frequency-shifted feedback fibre laser operated at 1450 nm**

Rissanen, J., Korobko, D. A., Zolotovskiy, I. O., Melkumov, M., Khopin, V. F. & Gumenyuk, R., 10 Mar 2017, In : Scientific Reports. 7, 44194.  
Research output: Contribution to journal › Article › Scientific › peer-review

### **Surface-Enhanced Impulsive Coherent Vibrational Spectroscopy**

Du, J., Harra, J., Virkki, M., Mäkelä, J. M., Leng, Y., Kauranen, M. & Kobayashi, T., 4 Nov 2016, In : Scientific Reports. 6, 36471.  
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### **Trends for isolated amino acids and dipeptides: Conformation, divalent ion binding, and remarkable similarity of binding to calcium and lead**

Ropo, M., Blum, V. & Baldauf, C., 3 Nov 2016, In : Scientific Reports. 6, 35772.

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

#### **Atomistic determinants of co-enzyme Q reduction at the Q<sub>1</sub>-site of the cytochrome bc<sub>1</sub> complex**

Postila, P. A., Kaszuba, K., Kuleta, P., Vattulainen, I., Sarewicz, M., Osyczka, A. & Róg, T., 26 Sep 2016, In : Scientific Reports. 6, 33607.

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#### **Brain hemodynamic activity during viewing and re-viewing of comedy movies explained by experienced humor**

Jääskeläinen, I. P., Pajula, J., Tohka, J., Lee, H. J., Kuo, W. J. & Lin, F. H., 21 Jun 2016, In : Scientific Reports. 6, 27741.

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

#### **Lower bound for the spatial extent of localized modes in photonic-crystal waveguides with small random imperfections**

Faggiani, R., Baron, A., Zang, X., Lalouat, L., Schulz, S. A., O'Regan, B., Vynck, K., Cluzel, B., De Fornel, F., Krauss, T. F. & Lalanne, P., 1 Jun 2016, In : Scientific Reports. 6, 27037.

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#### **1700 nm dispersion managed mode-locked bismuth fiber laser**

Noronen, T., Firstov, S., Dianov, E. & Okhotnikov, O. G., 21 Apr 2016, In : Scientific Reports. 6, 24876.

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

#### **Insulin resistance is associated with altered amino acid metabolism and adipose tissue dysfunction in normoglycemic women**

Wiklund, P., Zhang, X., Pekkala, S., Autio, R., Kong, L., Yang, Y., Keinänen-Kiukaanniemi, S., Alen, M. & Cheng, S., 15 Apr 2016, In : Scientific Reports. 6, 24540.

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#### **Step down Vascular Calcification Analysis using State-of-the-Art Nanoanalysis Techniques**

Curtze, S. C., Kratz, M., Steinert, M. & Vogt, S., 16 Mar 2016, In : Scientific Reports. 6, 23285.

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

#### **Quasi two-dimensional astigmatic solitons in soft chiral metastructures**

Laudyn, U. A., Jung, P. S., Karpierz, M. A. & Assanto, G., 15 Mar 2016, In : Scientific Reports. 6, 22923.

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

#### **Behaviour of one-step spray-coated carbon nanotube supercapacitor in ambient light harvester circuit with printed organic solar cell and electrochromic display**

Tuukkanen, S., Välimäki, M., Lehtimäki, S., Vuorinen, T. & Lupo, D., 9 Mar 2016, In : Scientific Reports. 6, 22967.

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#### **On the linear programming bound for linear Lee codes**

Astola, H. & Tabus, I., 1 Mar 2016, In : SpringerPlus. 5, 1, p. 1-13 13 p., 246.

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

#### **Optical detection of radon decay in air**

Sand, J., Ihantola, S., Peräjärvi, K., Toivonen, H. & Toivonen, J., 12 Feb 2016, In : Scientific Reports. 6, 21532.

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

#### **First passage time distribution in heterogeneity controlled kinetics: Going beyond the mean first passage time**

Godec, A. & Metzler, R., 8 Feb 2016, In : Scientific Reports. 6, 20349.

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#### **Membrane omega-3 fatty acids modulate the oligomerisation kinetics of adenosine A<sub>2A</sub> and dopamine D<sub>2</sub> receptors**

Guixà-González, R., Javanainen, M., Gómez-Soler, M., Cordobilla, B., Domingo, J. C., Sanz, F., Pastor, M., Ciruela, F., Martínez-Seara, H. & Selent, J., 22 Jan 2016, In : Scientific Reports. 6, 19839.

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### **Selective effect of cell membrane on synaptic neurotransmission**

Postila, P. A., Vattulainen, I. & Róg, T., 19 Jan 2016, In : Scientific Reports. 6, 19345.

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

### **Using multi-step proposal distribution for improved MCMC convergence in Bayesian network structure learning**

Larjo, A. & Lähdesmäki, H., 27 Dec 2015, In : Eurasip Journal on Bioinformatics and Systems Biology. 2015, 1, 6.

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

### **Variance-corrected Michaelis-Menten equation predicts transient rates of single-enzyme reactions and response times in bacterial gene-regulation**

Pulkkinen, O. & Metzler, R., 4 Dec 2015, In : Scientific Reports. 5, 17820.

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

### **Interleukin-6 and microRNA profiles induced by oral bacteria in human atheroma derived and healthy smooth muscle cells**

Pessi, T., Viiri, L. E., Raitoharju, E., Astola, N., Seppälä, I., Waldenberger, M., Lounatmaa, K., Davies, A. H., Lehtimäki, T., Karhunen, P. J. & Monaco, C., 1 Dec 2015, In : SpringerPlus. 4, 1

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

### **Genome-wide modeling of transcription kinetics reveals patterns of RNA production delays**

Honkela, A., Peltonen, J., Topa, H., Charapitsa, I., Matarese, F., Grote, K., Stunnenberg, H. G., Reid, G., Lawrence, N. D. & Rattray, M., 20 Oct 2015, In : Proceedings of the National Academy of Sciences of the United States of America. 112, 42, p. 13115-13120 6 p.

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

### **Comparative proteomics reveals human pluripotent stem cell-derived limbal epithelial stem cells are similar to native ocular surface epithelial cells**

Mikhailova, A., Jylhä, A., Rieck, J., Nättinen, J., Ilmarinen, T., Veréb, Z., Aapola, U., Beuerman, R., Petrovski, G., Uusitalo, H. & Skottman, H., 1 Oct 2015, In : Scientific Reports. 5, 14684.

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

### **Redox-induced activation of the proton pump in the respiratory complex I**

Sharma, V., Belevich, G., Gamiz-Hernandez, A. P., Róg, T., Vattulainen, I., Verkhovskaya, M. L., Wikström, M., Hummer, G. & Kaila, V. R. I., 15 Sep 2015, In : Proceedings of the National Academy of Sciences of the United States of America. 112, 37, p. 11571-11576 6 p.

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

### **Segmented molecular design of self-healing proteinaceous materials**

Sariola, V., Pena-Francesch, A., Jung, H., Çetinkaya, M., Pacheco, C., Sitti, M. & Demirel, M. C., 1 Sep 2015, In : Scientific Reports. 5, 13482.

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

### **A Highly Efficient Sensor Platform Using Simply Manufactured Nanodot Patterned Substrates**

Rasappa, S., Ghoshal, T., Borah, D., Senthamaraiannan, R., Holmes, J. D. & Morris, M. A., 20 Aug 2015, In : Scientific Reports. 5, 13270.

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

### **Human iPSC derived disease model of MERTK-associated retinitis pigmentosa**

Lukovic, D., Castro, A. A., Delgado, A. B. G., Bernal, M. D. L. A. M., Pelaez, N. L., Lloret, A. D., Espejo, R. P., Kamenarova, K., Sánchez, L. F., Cuenca, N., Cortón, M., Fernandez, A. A., Sorkio, A., Skottman, H., Ayuso, C., Erceg, S. & Bhattacharya, S. S., 11 Aug 2015, In : Scientific Reports. 5, 12910.

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

### **Caustics and rogue waves in an optical sea**

Mathis, A., Froehly, L., Toenger, S., Dias, F., Genty, G. & Dudley, J. M., 6 Aug 2015, In : Scientific Reports. 5, 12822.

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

### **Real sequence effects on the search dynamics of transcription factors on DNA**

Bauer, M., Rasmussen, E. S., Lomholt, M. A. & Metzler, R., 8 Jul 2015, In : Scientific Reports. 5, 10072.

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

### **Superdiffusion dominates intracellular particle motion in the supercrowded cytoplasm of pathogenic *Acanthamoeba castellanii***

Reverey, J. F., Jeon, J.-H., Bao, H., Leippe, M., Metzler, R. & Selhuber-Unkel, C., 30 Jun 2015, In : Scientific Reports. 5, 11690.

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

### **Emergent rogue wave structures and statistics in spontaneous modulation instability**

Toenger, S., Godin, T., Billet, C., Dias, F., Erkintalo, M., Genty, G. & Dudley, J. M., 20 May 2015, In : Scientific Reports. 5, 10380.

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

### **The evolutionary history of lethal metastatic prostate cancer**

Gundem, G., Van Loo, P., Kremeyer, B., Alexandrov, L. B., Tubio, J. M. C., Papaemmanuil, E., Brewer, D. S., Kallio, H. M. L., Högnäs, G., Annala, M., Kivinummi, K., Goody, V., Latimer, C., O'Meara, S., Dawson, K. J., Isaacs, W., Emmert-Buck, M. R., Nykter, M., Foster, C., Kote-Jarai, Z., Easton, D., Whitaker, H. C., Neal, D. E., Cooper, C. S., Eeles, R. A., Visakorpi, T., Campbell, P. J., McDermott, U., Wedge, D. C. & Bova, G. S., 15 Apr 2015, In : Nature. 520, 7547, p. 353-357 5 p.

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

### **N-Glycosylation as determinant of epidermal growth factor receptor conformation in membranes**

Kaszuba, K., Grzybek, M., Orłowski, A., Danne, R., Róg, T., Simons, K., Coskun, Ü. & Vattulainen, I., 7 Apr 2015, In : Proceedings of the National Academy of Sciences of the United States of America. 112, 14, p. 4334-4339 6 p.

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

### **Genomically amplified Akt3 activates DNA repair pathway and promotes glioma progression**

Turner, K. M., Sun, Y., Ji, P., Granberg, K. J., Bernard, B., Hu, L., Cogdell, D. E., Zhou, X., Yli-Harja, O., Nykter, M., Shmulevich, I., Yung, W. K. A., Fuller, G. N. & Zhang, W., 17 Mar 2015, In : Proceedings of the National Academy of Sciences of the United States of America. 112, 11, p. 3421-3426 6 p.

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

### **Proton-coupled electron transfer and the role of water molecules in proton pumping by cytochrome c oxidase**

Sharma, V., Enkavi, G., Vattulainen, I., Róg, T. & Wikström, M., 17 Feb 2015, In : Proceedings of the National Academy of Sciences of the United States of America. 112, 7, p. 2040-2045 6 p.

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

### **Extensive transduction of nonrepetitive DNA mediated by L1 retrotransposition in cancer genomes**

Tubio, J. M. C., Li, Y., Ju, Y. S., Martincorena, I., Cooke, S. L., Tojo, M., Gundem, G., Pipinikas, C. P., Zamora, J., Raine, K., Menzies, A., Roman-Garcia, P., Fullam, A., Gerstung, M., Shlien, A., Tarpey, P. S., Papaemmanuil, E., Knappskog, S., Van Loo, P., Ramakrishna, M., Davies, H. R., Marshall, J., Wedge, D. C., Teague, J. W., Butler, A. P., Nik-Zainal, S., Alexandrov, L., Behjati, S., Yates, L. R., Bolli, N., Mudie, L., Hardy, C., Martin, S., McLaren, S., O'Meara, S., Anderson, E., Maddison, M., Gamble, S., Foster, C., Warren, A. Y., Whitaker, H., Brewer, D., Eeles, R., Cooper, C., Neal, D., Lynch, A. G., Visakorpi, T., Isaacs, W. B., Van't Veer, L., Caldas, C., Desmedt, C., Sotiriou, C., Aparicio, S., Foekens, J. A., Eyfjörd, J. E., Lakhani, S. R., Thomas, G., Myklebost, O., Span, P. N., Børresen-Dale, A. L., Richardson, A. L., Van De Vijver, M., Vincent-Salomon, A., Van Den Eynden, G. G., Flanagan, A. M., Futreal, P. A., Janes, S. M., Bova, G. S., Stratton, M. R., McDermott, U. & Campbell, P. J., 1 Aug 2014, In : Science. 345, 6196, 1251343.

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

### **Facile strain analysis of largely bending films by a surface-labelled grating method**

Akamatsu, N., Tashiro, W., Saito, K., Mamiya, J. I., Kinoshita, M., Ikeda, T., Takeya, J., Fujikawa, S., Priimagi, A. & Shishido, A., 20 Jun 2014, In : Scientific Reports. 4, 5377.

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



**Upstream Transcription Factor 1 (USF1) allelic variants regulate lipoprotein metabolism in women and USF1 expression in atherosclerotic plaque**

Fan, Y. M., Hernesniemi, J., Oksala, N., Levula, M., Raitoharju, E., Collings, A., Hutri-Kähönen, N., Juonala, M., Marniemi, J., Lyytikäinen, L. P., Seppälä, I., Mennander, A., Tarkka, M., Kangas, A. J., Soininen, P., Salenius, J. P., Klopp, N., Illig, T., Laitinen, T., Ala-Korpela, M., Laaksonen, R., Viikari, J., Kähönen, M., Raitakari, O. T. & Lehtimäki, T., 11 Apr 2014, In : Scientific Reports. 4, 4650.

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

**Tooth wear and dentoalveolar remodeling are key factors of morphological variation in the Dmanisi mandibles**

Margvelashvili, A., Zollikofer, C. P. E., Lordkipanidze, D., Peltomäki, T. & De León, M. S. P., 22 Oct 2013, In : Proceedings of the National Academy of Sciences of the United States of America. 110, 43, p. 17278-17283 6 p.

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

**An ensemble of classifiers based on different texture descriptors for texture classification**

Paci, M., Nanni, L. & Severi, S., Jul 2013, In : Journal of King Saud University - Science. 25, 3, p. 235-244 10 p.

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

**Active optical clock based on four-level quantum system**

Zhang, T. G., Wang, Y. F., Zang, X. R., Zhuang, W. & Chen, J. B., Jun 2013, In : Chinese Science Bulletin. 58, 17, p. 2033-2038 6 p.

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

**Transient formation of water-conducting states in membrane transporters**

Li, J., Shaikh, S. A., Enkavi, G., Wen, P. C., Huang, Z. & Tajkhorshid, E., 7 May 2013, In : Proceedings of the National Academy of Sciences of the United States of America. 110, 19, p. 7696-7701 6 p.

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

**Structure-phenotype correlations of human CYP21A2 mutations in congenital adrenal hyperplasia**

Haider, S., Islam, B., D'Atri, V., Sgobba, M., Poojari, C., Sun, L., Yuen, T., Zaidi, M. & New, M. I., 12 Feb 2013, In : Proceedings of the National Academy of Sciences of the United States of America. 110, 7, p. 2605-2610 6 p.

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

**Subangstrom resolution x-ray structure details aquaporin-water interactions**

Eriksson, U. K., Fischer, G., Friemann, R., Enkavi, G., Tajkhorshid, E. & Neutze, R., 2013, In : Science. 340, 6138, p. 1346-1349 4 p.

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

**Entropy analysis of word-length series of natural language texts: Effects of text language and genre**

Kalimeri, M., Constantoudis, V., Papadimitriou, C., Karamanos, K., Diakonos, F. K. & Papageorgiou, H., Sep 2012, In : INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS. 22, 9, 1250223.

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

**Structure and permeation mechanism of a mammalian urea transporter**

Levin, E. J., Cao, Y., Enkavi, G., Quick, M., Pan, Y., Tajkhorshid, E. & Zhou, M., 10 Jul 2012, In : Proceedings of the National Academy of Sciences of the United States of America. 109, 28, p. 11194-11199 6 p.

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

**A Bayesian analysis of the chromosome architecture of human disorders by integrating reductionist data**

Emmert-Streib, F., De Matos Simoes, R., Tripathi, S., Glazko, G. V. & Dehmer, M., 2012, In : Scientific Reports. 2, 513.

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

**Physical chemistry: Water's wafer-thin surface**

Jungwirth, P., 8 Jun 2011, In : Nature. 474, 7350, p. 168-169 2 p.

Research output: Contribution to journal › Short survey › Scientific › peer-review