



REGULATORY AND LEGISLATIVE DEVELOPMENTS

New NNCO Director

The US National Nanotechnology Coordination Office (NNCO) has named as new Director, Dr. Michael Meader. Dr. Meader previously worked in NASA on managing nanotechnology projects, including as Chair of the Nanotechnology Roadmap Team, and has longstanding collaboration experience with the National Nanotechnology Initiative (NNI).

<http://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&pagina=44&data=21/08/2014>

PCAST Assessment of NNI

The President's Council of Advisors of Science and Technology (PCAST) has released its 2015 assessment of the National Nanotechnology Initiative (NNI). The PCAST review posits that the NNI's work is at a critical turning point, at which the research and development of nanoscale materials and particles will rapidly transition into interdisciplinary nanosystems and commercialization. PCAST recommends that the US needs to build a framework to support the translation of nanotechnologies into commercial products.

http://www.whitehouse.gov/sites/default/files/microsites/ostp/PCAST/pcast_fifth_nni_review_oct2014_final.pdf

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

An enhanced LSPR fiber-optic nanoprobe for ultrasensitive detection of protein biomarkers.

Biosensors and Bioelectronics, Vol. 61, pp. 95 – 101, 2014. Mollye Sanders, Yongbin Lin, Jianjun Wei, Taylor Bono, Robert G. Lindquist.

<http://www.sciencedirect.com/science/article/pii/S0956566314003418>

Gold Nanoparticle-Decellularized Matrix Hybrids for Cardiac Tissue Engineering.

Nano Letters, September 2014. Michal Shevach, Sharon Fleischer, Assaf Shapira, Tal Dvir.

<http://pubs.acs.org/doi/abs/10.1021/nl502673m>

Modeling putative therapeutic implications of exosome exchange between tumor and immune cells.

Proceedings of the National Academy of Sciences, 2014. Mingyang Lu, Bin Huang, Samir M. Hanash, José N. Onuchic, Eshel Ben-Jacob.

<http://www.pnas.org/content/early/2014/09/18/1416745111>

Human airway musculature on a chip: an in vitro model of allergic asthmatic bronchoconstriction and bronchodilation.

Lab on a Chip, Issue 20, August 2014. Alexander Peyton Nesmith, Ashutosh Agarwal, Megan Laura McCaina, Kevin Kit Parker.

<http://pubs.rsc.org/en/Content/ArticleLanding/2014/LC/C4LC00688G#divAbstract>

Simulation of complex transport of nanoparticles around a tumor using tumor-microenvironment-on-chip.

Journal of Controlled Release, Vol. 194, pp. 157 – 167, 2014. Bongseop Kwak, Altug Ozcelikkale, Crystal S. Shin, Kinam Park, Bumsoo Han.

<http://www.sciencedirect.com/science/article/pii/S0168365914006142>

Insight into Curcumin-Loaded β -Lactoglobulin Nanoparticles: Incorporation, Particle Disintegration, and Releasing Profiles.

Journal of Agricultural and Food Chemistry, Vol. 62, No. 35, pp. 8837 – 8847, August 2014. Zi Teng, Ying Li, Qin Wang.

<http://pubs.acs.org/doi/abs/10.1021/f503199g>

Nanomechanical motion of Escherichia coli adhered to a surface.

Applied Physics Letters, Vol. 105, 2014. C. Lissandrello, F. Inci, M. Francom, M. R. Paul, U. Demirci, K. L. Ekinci.

<http://scitation.aip.org/content/aip/journal/apl/105/11/10.1063/1.4895132>

Generic epitaxial graphene biosensors for ultrasensitive detection of cancer risk biomarker.

2D Materials, Vol. 1, No. 2, September 2014. Z Tehrani, G Burwell, M A Mohd Azmi, A Castaing, R Rickman, J Almarashi, P Dunstan, A Miran Beigi, S H Doak, O J Guy.

<http://iopscience.iop.org/2053-1583/1/2/025004/>

The synthesis, characterisation and in vivo study of a bioceramic for potential tissue regeneration applications. Scientific Reports, Vol. 4, Article No. 6235, August 2014. Gérrard Eddy Jai Poinern, Ravi Krishna Brundavanam, Xuan Thi Le, Philip K. Nicholls, Martin A. Cake, Derek Fawcett.
<http://www.nature.com/srep/2014/140829/srep06235/full/srep06235.html>

An extracorporeal blood-cleansing device for sepsis therapy. Nature Medicine, Vol. 20, pp. 1211 – 1216, September 2014. Joo H Kang, Michael Super, Chong Wing Yung, Ryan M Cooper, Karel Domansky, Amanda R Graveline, Tadanori Mammoto, Julia B Berthet, Heather Tobin, Mark J Cartwright, Alexander L Watters, Martin Rottman, Anna Waterhouse, Akiko Mammoto, Nazita Gamini, Melissa J Rodas, Anxhela Kole, Amanda Jiang, Thomas M Valentin, Alexander Diaz, Kazue Takahashi, Donald E Ingber.
<http://www.nature.com/nm/journal/v20/n10/full/nm.3640.html>

Exploration of Conformational Spaces of High-Mannose-Type Oligosaccharides by an NMR-Validated Simulation. Angewandte Chemie, Vol. 53, Issue 41, pp. 10941 – 10944, September 2014. Takumi Yamaguchi, Yoshitake Sakae, Dr. Ying Zhang, Sayoko Yamamoto, Yuko Okamoto, Koichi Kato.
<http://onlinelibrary.wiley.com/doi/10.1002/anie.201406145/abstract;jsessionid=7F2DA587179A346C44C6E88008F32784.f01t01>

Noninvasive nonlinear focusing and imaging through strongly scattering turbid layers. Optica, Vol. 1, Issue 3, pp. 170 – 174. Ori Katz, Eran Small, Yefeng Guan, Yaron Silberberg.
<http://www.opticsinfobase.org/optica/abstract.cfm?uri=optica-1-3-170>

Nanorobotic Investigation Identifies Novel Visual, Structural and Functional Correlates of Autoimmune Pathology in a Blistering Skin Disease Model. PLOS One, September 2014. Kristina Seiffert-Sinha, Ruiguo Yang,

Carmen K. Fung, King W. Lai, Kevin C. Patterson, Aimee S. Payne, Ning Xi, Animesh A. Sinha.
<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0106895>

Nanoscale high-content analysis using compositional heterogeneities of single proteoliposomes. Nature Methods, Vol. 11, pp. 931 – 934, August 2014. Signe Mathiasen, Sune M Christensen, Juan José Fung, Søren G F Rasmussen, Jonathan F Fay, Sune K Jorgensen, Salome Veshaguri, David L Farrens, Maria Kiskowski, Brian Kobilka, Dimitrios Stamou.
<http://www.nature.com/nmeth/journal/v11/n9/full/nmeth.3062.html>

Accounting for biological aggregation in heating and imaging of magnetic nanoparticles. Technology, Vol. 2, Issue 3, September 2014. Michael L. Etheridge, Katie R. Hurley, Jinjin Zhang, Seongho Jeon, Hattie L. Ring, Christopher Hogan, Christy L. Haynes, Michael Garwood, John C. Bischof.
<http://www.worldscientific.com/doi/abs/10.1142/S2339547814500198>

Surface Free Energy Activated High-Throughput Cell Sorting. Analytical Chemistry, Vol. 86, Issue 18, pp. 9350 – 9355, August 2014. Xinru Zhang, Qian Zhang, Tao Yan, Zeyi Jiang, Xinxin Zhang, Yi Y. Zuo.
<http://pubs.acs.org/doi/abs/10.1021/ac503100a>

Haplotype Counting by Next-Generation Sequencing for Ultrasensitive Human DNA Detection. The Journal of Molecular Diagnostics, Vol. 16, Issue 5, pp. 495 – 503, September 2014. Marija Debeljak, Donald N. Freed, Jane A. Welch, Lisa Haley, Katie Beierl, Brian S. Iglehart, Aparna Pallavajjala, Christopher D. Gocke, Mary S. Leffell, Ming-Tseh Lin, Jonathan Pevsner, Sarah J. Wheelan, James R. Eshleman.
[http://jmd.amipathol.org/article/S1525-1578\(14\)00099-3/abstract](http://jmd.amipathol.org/article/S1525-1578(14)00099-3/abstract)

CONFERENCES AND WORKSHOPS

Nanoinformatics for Environmental Health and Biomedicine, 2 – 5 November 2014, Belfast, UK
 Data management
 Nanomaterial characterization
 Computing applications for nanomedicine
<http://nanoinfo2014.weebly.com/>

NanoCon 2014, 5 – 7 November 2014, Brno, Czech Republic
 Tissue engineering
 Biochemical applications
 Nano-implants
 Anti-tumor therapy
<http://www.nanocon.eu/en/topics/>

Nano Bio & Med 2014, 18 – 21 November 2014, Barcelona, Spain

Nanobioanalysis *in vitro*
 Drug Delivery
 Molecular Imaging and Biophotonics
 Nanotoxicology
 Bio-nano measurement and microscopy
 Far future challenges

<http://www.nanobiomedconf.com/NBM/topics.php>

International Workshop on NanoBioscience, 24 – 26 November 2014, Ispra, Italy

Nanomedicine
In vitro characterization
 Protein adsorption
 Interactions with nanovectors

<https://ec.europa.eu/jrc/sites/default/files/eia-training-2014-ihcp-a-05.pdf>

NanoPortugal 2015, 11 – 13 February 2015, Lisbon, Portugal

Nanoinstrumentation
 Nanoscale modeling
 Graphene
 Nanomedicine

<http://www.nanopt.org/15EN/topics.php?m=c&s=to>

1st European Conference on Pharmaceutics: Drug Delivery, 13 – 15 April 2015, Reims, France

Targeting
 Liposomes and nanoparticles

<http://www.apgi.org/Reims2015.htm>

REFERENCE SECTION

Nanobio- and Nanomedicine Companies

Listed alphabetically:

http://www.nanowerk.com/nanotechnology/nanomaterial/nanobiomedicine_a.php

Nano Organizations

National Center for Toxicological Research (NCTR):

<http://www.fda.gov/AboutFDA/CentersOffices/NCTR/default.htm>

National Nanotechnology Initiative (NNI):

<http://www.nano.gov/>

Nano Science and Technology Consortium (NSTC):

<http://www.nstc.in/>

Nano Science and Technology Institute (NSTI):

<http://www.nsti.org/>

The Nanotechnology Institute (NTI):

<http://nanotechinstitute.org/>

Nano Journals

American Chemical Society -- Nano Letters:

<http://pubs.acs.org/journal/nalefd>

Institute of Physics – Nanotechnology:

<http://iopscience.iop.org/0957-4484/>

Journal of Nanoscience and Nanotechnology:

<http://www.aspbs.com/jnn/>

NanoTrends - A Journal of Nanotechnology and its Applications: <http://www.nstc.in/journal/default.aspx>

BCC Research -- Nanotechnology Reports:

<http://www.bccresearch.com/index/category/code/nanotechnology>

Nanomedicine: Nanotechnology, Biology, and Medicine: <http://www.nanomedjournal.com/home0>

Nanomedicine:

<http://www.futuremedicine.com/page/about.jsp>

Nature Nanotechnology:

http://www.nature.com/nnano/focus/highlights/index.html?WT.mc_id=NM1110CT01

CONTACT

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