

Curriculum vitae

Priv.-Doz. Dr. Pavel A. Levkin

Karlsruhe Institute of Technology (KIT)
Institute of Toxicology and Genetics
Institute of Organic Chemistry
Hermann-von-Helmholtz Platz 1
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Germany

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Current position	Head of research group of Biofunctional Materials Karlsruhe Institute of Technology (KIT) <i>Institute of Toxicology and Genetics und Institute of Organic Chemistry</i>	2009-present
Priv.-Doz.	Habilitation in Organic Chemistry, KIT <i>Affiliation with Heidelberg University, Applied Physical Chemistry, Prof. Grunze</i>	2016 2009-2014
Postdoc	University of California, Berkeley, USA Group of Prof. J.M.J. Fréchet and Dr. F. Svec Polymer Chemistry	2007-2009
Visiting scientist	University of Vienna, Austria Group of Prof. Wolfgang Lindner	2006
Ph.D.	Chemistry (<i>Summa Cum Laude</i>) University of Tübingen, Germany Group of Prof. Volker Schurig Organic and Analytical Chemistry	2003 – 2007
B.Sc. and M.Sc.	Chemistry and Chemical Engineering (<i>with honors</i>) Institute of Chemical Physics, Russian Academy of Sciences and Moscow Institute of Fine Chemical Technology Group of Prof. Rem Kostyanovsky	1997 – 2003

Research Interests

Fundamentals

- Polymer synthesis, hydrogels
- Combinatorial synthesis of bioactive and functional molecules
- Dynamic covalent chemistry
- Photochemistry
- Porous polymers
- Surface functionalization
- Surface patterning
- Superwettability, superhydrophobicity
- Liquid-infused interfaces

- Gene-delivery
- Miniaturization of biology and chemistry

Functional Materials, Interfaces and Nanoparticles. Applications.

- Bioapplications of functional materials
- Functional micropatterns
- Dynamic and responsive materials
- High-throughput screenings of cells
- Cell-surface interactions
- Cell transfection
- Stem cell differentiation

Future research directions & interests

- Functional materials systems engineering
- Ultra high-throughput chemical and screening approaches
- Dynamic functional systems, smart materials
- Personalized medicine
- Miniaturization of biology and chemistry
- Machine learning

Funding

2017-2019	EXIST Forschungstransfer Grant
2017	ERC Proof-of-Concept Grant, CellPrintArray
2015	ERC Proof-of-Concept Grant, CellScreenChip
2014	Helmholtz ERC-Prämie
2014-2018	ERC Starting Grant (DropCellArray-337077)
2012	Helmholtz-Sonderförderung Grant
2011	Helmholtz-Enterprise Grant
2010	Young Investigators Network Start-up grant
2009-2014	Helmholtz-University Young Investigator Group Grant,

Scientific Reviewer

JACS, Nature Communication, Analytical Chemistry, Angewandte Chemie, Biointerphases, Chemical Communication, Journal of the Materials Chemistry, Nano Letters, Acta Biomaterialia, Advanced Functional Materials, Drug Research, Green Chemistry, Macromolecular Bioscience, Advanced Materials, Biomaterials, ACS Applied Materials and Interfaces, ACS Nano, Advanced Healthcare Materials, Langmuir, Advanced Materials Interfaces, Biomacromolecules, Drug Research, European Polymer Journal, Journal of Chromatography A, Journal of Separation Science, Macromolecular Bioscience, Macromolecular Rapid Communication, Science, Scientific Reports, Small

On the Editorial Boards of

Advanced Biosystems (Wiley)
Horizon Materials Bio (Elsevier)
Advanced Functional Materials (Wiley)

Teaching activities

Habilitation in Organic Chemistry, Institute of Organic Chemistry, KIT, Prof. Bräse,
11.2016. 2 SWS teaching, Biofunctional Polymer Materials and Nanoparticles

Lectures

- | | |
|---------------------|--|
| 2014-present | Lecture course on “ <i>Biofunctional Materials and Nanoparticles</i> ” at KIT, Institute of Organic Chemistry |
| 2010-present | Teaching <i>polymer chemistry</i> and <i>surface functionalization</i> to graduate students at the Biointerfaces Graduate School, Karlsruhe Institute of Technology, Germany |
| 2009-2012 | Physical Chemistry Colloquium, University of Heidelberg, Germany
Teaching both in English or German is possible |

Innovation

- founder of **ScreenFect GmbH** (formerly Incella GmbH), founded in 2012, activities: lipid synthesis research, development and commercialization of novel synthetic gene delivery vectors for biological and biomedical applications. ScreenFect transfection reagents are commercialized worldwide and cited more than 115 times (2016).

www.screenfect.com



- founder of **Aquarray GmbH**, founded 29.03.2018, development and commercialization of the novel miniaturized platform for cell experiments and personalized medicine.

www.aquarray.com



Organizing Conferences

- 2017.11 Materials Research Society (MRS), November 2017, Boston
“BM10—Bioinspired Interfacial Materials with Superwettability” Symposium co-organizing with Robin Ras (Aalto University, Finland), Shutao Wang (CAS Beijing, China), Haeshin Lee (KAIST, Korea)

Awards

- 2017; Aquarray projet wins Science4Life Venture Cup 2017**,
www.science4life.de/GewinnerProfil383.aspx
- 2015; Heinz Meier-Leibnitz Prize** for early career researchers in Germany awarded by the German Research Foundation (DFG) and the German Federal Ministry of Education and Research (BMBF). Highlighted by [DFG, Angewandte Chemie](#).

- **2014; Ewald-Wicke Prize** of the German Bunsen Society of Physical Chemistry from the Ewald Wicke Foundation for the promotion of young scientists “for his outstanding work in the field of the production of structured superhydrophobic/superhydrophilic surfaces and their applications in cell biology and microfluidics.” Highlighted in [Angewandte Chemie](#) and [ChemistryViews](#).
- **2014-2018; ERC Starting Grant**. “DropletMicroarrays: Ultra High-Throughput Screening of Cells in 3D Microenvironments” (€1,5M);
- **2012; 2018; Co-founder** of ScreenFect GmbH and Aquarray GmbH, respectively
- **2010-2014; Helmholtz-University Young Investigator Group** Grant (€1,25M);
- **2006; The Ernst-Bayer-Prize** from the German Chemical Society (GDCh);
- **2005, 2007; Poster awards** at 17th and 19th ISCD, Italy and USA

Publications, Patents, Books

2018

88. Slippery Lubricant-Infused Surfaces: Properties and Emerging Applications

J. Li, E. Ueda, D. Paulssen

Advanced Functional Materials, **2018**, in press

87. Surface Functionalization and Patterning by Multifunctional Resorcinarenes

F Behboodi-Sadabad, V Trouillet, A Welle, PB Messersmith, PA Levkin

ACS applied materials & interfaces, **2018**, in press

86. Reparable Superhydrophobic Surface with Hidden Reactivity, Its Photofunctionalization and Photopatterning

X Du, M Wang, A Welle, F Behboodi-Sadabad, YL Wang, PA Levkin, Z Gu

Advanced Functional Materials, **2018**, 28, 1803765

85. Formation of Liquid–Liquid Micropatterns through Guided Liquid Displacement on Liquid-Infused Surfaces

D Paulssen, W Feng, I Pini, PA Levkin

Advanced Materials Interfaces, **2018**, 5 (18), 1800852

84. Superoleophobic Slippery Lubricant-Infused Surfaces: Combining Two Extremes in the Same Surface

Z Dong, MF Schumann, MJ Hokkanen, B Chang, A Welle, Q Zhou, Robin HA Ras, Zhenliang Xu, Martin Wegener, Pavel A. Levkin

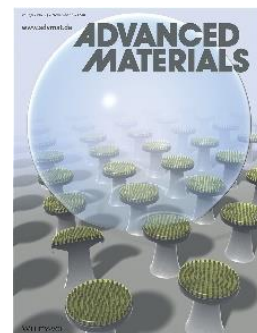
Advanced Materials, **2018**, 1803890 (inside front cover)

83. Droplet Microarray: miniaturized platform for rapid formation and high throughput screening of embryoid bodies

T. Tronser, K. Demir, M. Reischl, M. Bastmeyer, P.A. Levkin

Lab on a Chip, **2018**, 18, 2257

82. Bacterial cellulose promotes long-term stemness of mESC



Tina Tronser, Anna Laromaine, Anna Roig, Pavel A Levkin
ACS Applied Materials & Interfaces, **2018**, 10, 16260 ([link](#))

81. Free-standing three-dimensional hollow bacterial cellulose structures with controlled geometry via patterned superhydrophobic-hydrophilic surfaces

A Laromaine, T Tronser, I Pni, S Parets, PA Levkin, A Roig
Soft Matter, **2018**, 14, 3955 ([link](#))

80. Droplet Microarrays: From Surface Patterning to High-Throughput Applications

W. Feng, E. Ueda, P.A. Levkin
Advanced Materials, **2018**, 30, 1706111 ([link](#))

79. One-Pot Parallel Synthesis of Lipid Library via Thiolactone Ring Opening and Screening for Gene Delivery

M. Molla, A. Boeser, A. Rana, K. Schwarz, P. A. Levkin
Bioconjugate Chem. **2018**, 29, 992 ([link](#))

78. Bio-Inspired Strategy for Controlled Polymerization and Photopatterning of Plant Polyphenols

F Behboodi-Sadabad, H Zhang, V Trouillet, A Welle, N Plumeré, P.A. Levkin
Chemistry of Materials, **2018**, 30, 1937 ([link](#))

77. Patterned superhydrophobic surfaces to process and characterize biomaterials and 3D cell culture

AI Neto, PA Levkin, J Mano
Materials Horizons, **2018**, 5, 379 ([link](#))

76. Micro-patterns on nanocellulose films and paper by photo-induced thiol-yne click coupling: a facile method toward wetting with spatial resolution

J Guo, I Filpponen, LS Johansson, S Heißler, L Li, P Levkin, OJ Rojas
Cellulose, **2018** 25 (1), 367-375, ([link](#))

75. Fish-Microarray: A Miniaturized Platform for Single-Embryo High-Throughput Screenings

Anna A. Popova, Daniel Marcato, Ravindra Peravali, Ilona Wehl, Ute Schepers, and Pavel A. Levkin
Advanced Functional Materials, **2018**, 28, 1703486 ([link](#))

2017

74. High-Density Droplet Microarray of Individually Addressable Electrochemical Cells

H. Zhang, T. Oellers, W. Feng, T. Abdulazim, E. N. Saw, A. Ludwig, P. A. Levkin, N. Plumeré
Analytical Chemistry, **2017**, 89, 5832–5839

73. Evaluation of the Droplet-Microarray Platform for High-Throughput Screening of Suspension Cells

Anna A Popova, Claire Depew, Katya Manuella Permana, Alexander Trubitsyn, Ravindra Peravali, Jorge Ángel González Ordiano, Markus Reischl, Pavel A Levkin
SLAS Technology, **2017**, 22, 163-175

72. Phospholipid arrays on porous polymer coatings generated by micro-contact spotting

Sylvia Sekula-Neuner, Monica de Freitas, Lea-Marie Tröster, Tobias Jochum, Pavel A. Levkin, Michael Hirtz, Harald Fuchs
Beilstein J. Nanotechnol. **2017**, 8, 715–722

71. Droplet Microarray Based on Patterned Superhydrophobic Surfaces Prevents Stem Cell Differentiation and Enables High-Throughput Stem Cell Screening

T Tronser, AA Popova, M Jaggy, M Bastmeyer, PA Levkin
Advanced Healthcare Materials **2017**, 6 (23), 1700622

70. Miniaturized platforms for high-throughput screening of stem cells

Tina Tronser, Anna Popova, Pavel Levkin
Current Opinion in Biotechnology, **2017**, 46, 141-149

69. UV-Triggered Polymerization, Deposition and Patterning of Plant Phenolic Compounds

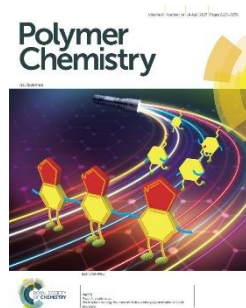
Farid Behboodi-Sadabad, Huijie Zhang, Vanessa Trouillet, Alexander Welle, Nicolas Plumeré, Pavel A. Levkin
Advanced Functional Materials, **2017**, 27, 1700127

68. Patterned SLIPS for the Formation of Arrays of Biofilm Microclusters with Defined Geometries

Julia Bruchmann, Ivana Pini, Tejeshwar S. Gill, Thomas Schwartz, Pavel A. Levkin
Adv. Healthcare Mater., **2017**, 6

67. Bio-inspired strategy for controlled dopamine polymerization in basic solutions

X Du, L Li, F Behboodi-Sadabad, A Welle, J Li, S Heissler, H Zhang, N. Plumere, P.A. Levkin
Polymer Chemistry, **2017**, 8, 2145



66. CD44v6-Peptide Functionalized Nanoparticles Selectively Bind to Metastatic Cancer Cells

L. Li, M. Schmitt, A. Matzke, P. Wadhwani, V. Orian-Rousseau, P.A. Levkin
Advanced Science, **2017**, 4, 1600202



2016

65. Chapter in “Patterned Superhydrophobic Surfaces” in “Non-wettable Surfaces: Theory, Preparation and Applications”, Eds. R. Ras and A. Marmur, Royal Society of Chemistry. E Ueda, PA Levkin, **2016**, 182-222

64. Superhydrophobic and Slippery Lubricant-Infused Flexible Transparent Nanocellulose Films by Photoinduced Thiol–Ene Functionalization

J Guo, W Fang, A Welle, W Feng, I Filpponen, OJ Rojas, PA Levkin
ACS Applied Materials & Interfaces **2016**, 8 (49), 34115-34122

63. UV-Induced Disulfide Formation and Reduction for Dynamic Photopatterning

Lei Li, Wenqian Feng, Alexander Welle, Pavel A. Levkin
Angewandte Chemie Int. Ed., **2016**, 128, 13969-13973

62. Facile fabrication of robust superhydrophobic surfaces: comparative investigation

Robin Bär, Simon Widmaier, Pavel A. Levkin
RSC Advances, 2016, 6, 98257-98266

61. Superhydrophilic-Superhydrophobic Patterned Surfaces as High-density Cell Microarrays: Optimization of Reverse Transfection

Erica Ueda, Wenqian Feng, Pavel A. Levkin
Advanced Healthcare Materials, 2016, 5, 2646-2654



60. Droplet Microarray based on superhydrophobic-superhydrophilic

Gabriella E. Jogia, Tina Tronser, Anna A. Popova, Pavel A. Levkin
Microarrays, **2016**, 5, 28

59. Collaborative Action of Surface Chemistry and Topography in the Regulation of Mesenchymal and Epithelial Markers and the Shape of Cancer Cells

Li J, Kwiatkowska B, Lu H, Voglstätter M, Ueda E, Grunze M, Sleeman J, Levkin PA,

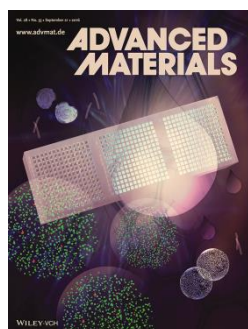
Nazarenko I.

ACS Appl. Mater. Interfaces, **2016**, 8 (42), 28554–28565

58. Fabrication of Hydrogel Particles of Defined Shapes using Hydrophilic-Superhydrophobic Micropatterns

Ana I. Neto, Konstantin Demir, Anna A. Popova, Mariana B. Oliveira, João F. Mano and Pavel A. Levkin

Advanced Materials, **2016 (Inside Cover)**



57. Droplet-Microarray on Superhydrophobic-Superhydrophilic Patterns for High-Throughput Live Cell Screenings

Anna A. Popova, Konstantin Demir, Titus Genisius Hartanto, Eric Schmitt and Pavel A. Levkin

RSC Advances, **2016**, DOI: 10.1039/C6RA06011K

56. Single-Step Fabrication of High-Density Microdroplet Arrays of Low Surface Tension Liquids

W. Feng, X. Du, L. Li, A. Welle, P.A. Levkin

Advanced Materials, **2016**, 28, 3202 ([link](#))

55. Single-Tailed Lipidoids Enhance the Transfection Activity of Their Double-Tailed Counterparts

Yihang Wu, Linxian Li, Qing Chen, Yi Su, Pavel A. Levkin, and Gary Davidson

ACS Comb. Sci., **2016**, 18, 43–50

54. Surface functionalization of conjugated microporous polymer thin films and nanomembranes using orthogonal chemistries

P. Lindemann, A. Schade, L. Monnereau, W. Feng, K. Batra, H. Gliemann, P. Levkin, S. Bräse, C. Wöll and M. Tsotsalas

J. Mater. Chem. A, **2016**, 4, 6815 ([link](#))

53. Click-Chemistry Immobilized 3D-infused Microarrays in Nanoporous Polymer Substrates

M. Hirtz, W. Feng, H. Fuchs, P.A. Levkin

Adv. Mater. Inter. **2016**, 1500469 ([link](#))

52. Dual stimuli-responsive polyamines derived from modified N-vinylpyrrolidones through CuAAC click chemistry

Anselmo del Prado, Rodrigo Navarro, Pavel Levkin, Alberto Gallardo, Carlos Elvira and Helmut Reinecke

J. Polym. Sci. A, **2016**, 54, 1098–1108

51. Combinatorial Approach to Nanoarchitectonics for Nonviral Delivery of Nucleic Acids

M. Molla, P.A. Levkin

Adv. Mater. **2016**, 28, 1159 ([link](#))

2015

50. Freestanding MOF Microsheets with Defined Size and Geometry Using Superhydrophobic–Superhydrophilic Arrays

M. Tsotsalas, H. Maheshwari, S. Schmitt, S. Heißler, W. Feng and P.A. Levkin

Adv. Mater. Interfaces, **2015**, 3, 1500392 ([link](#))

49. Hierarchical Micro-Nano Surface Topography Promotes Long-term Maintenance of Undifferentiated Mouse Embryonic Stem Cells

M. Jaggy, P. Zhang, A. M. Greiner, T.J. Autenrieth, V. Nedashkivska, A. N. Efremov, C. Blattner, M. Bastmeyer, P.A. Levkin

Nano Letters, **2015**, 15, 7146–7154

48. Reversible and Rewritable Surface Functionalization and Patterning via Photodynamic Disulfide Exchange

Xin Du, Linxian Li, Junsheng Li, Alexander Welle, Wenqian Feng, and Pavel A. Levkin

Advanced Materials, **2015**, 27, 4997

47. Droplet-Array (DA) Sandwich Chip: a Versatile Platform for High Throughput Cell Screenings Based on Superhydrophobic-Superhydrophilic Micropatterning

Anna A. Popova, Sebastian M. Schillo, Konstantin Demir, Erica Ueda, A. Nesterov-Mueller and Pavel A. Levkin

Advanced Materials, **2015**, 27, 5217

46. UV-induced tetrazole-thiol reaction for polymer conjugation and surface functionalization

Wenqian Feng, Linxian Li, Chengwu Yang, Alexander Welle, Oliver Trapp and Pavel A. Levkin

Angewandte Chemie Int. Ed. **2015**, 54, 8732

45. ScreenFect A: an efficient and low toxic liposome for gene delivery to mesenchymal stem cells

Li-Ming Li, Gui-Xin Ruan, Ming-Yi HuangFu, Zhi-Lan Chen, Hui-Na Liu, Lin-Xian Li, Yu-Lan Hu, Min Han, Gary Davidson, Pavel A Levkin, Jian-Qing Gao

Int. J. Pharm., **2015**, 488, 1-11

2014

44. Photo Active, Inscribable and Non-wettable Transparent Surface: A Versatile Platform for Precision Surface Patterning

J. Li, L. Li, X. Du, W. Feng, A. Welle, O. Trapp, M. Grunze, M. Hirtz and P.A. Levkin

Nano Letters, **2014**, 15, 675

43. UV-Triggered Dopamine Polymerization: Control of Polymerization, Surface Coating and Photopatterning

X. Du, L. Li, J. Li, C. Yang, N. Frenkel, A. Welle, S. Heissler, A. Nefedov, M. Grunze, P. A.

Levkin

Advanced Materials, **2014**, 26, 8029

42. Surface Patterning via Thiol-Yne Click Chemistry: an Extremely Fast and Versatile Approach to Superhydrophilic-Superhydrophobic Micropatterns

Wenqian Feng, Linxian Li, Erica Ueda, Junsheng Li, Stefan Heißler, Alexander Welle, Oliver Trapp and Pavel A. Levkin

Advanced Materials Interfaces, **2014**, DOI: 10.1002/admi.201400269

41. Origami magnetic cellulose: controlled magnetic fraction and patterning of flexible bacterial cellulose

Muling Zeng, Anna Laromaine, Wenqian Feng, Pavel A. Levkin and Anna Roig

Journal of Materials Chemistry C **2014**, DOI: 10.1039/c4tc00787e

40. Direct UV-Induced Functionalization of Surface Hydroxy Groups by Thiol–OI Chemistry

Linxian Li, Junsheng Li, Xin Du, Alexander Welle, Michael Grunze, Oliver Trapp and Pavel A. Levkin

Angewandte Chemie Int. Ed., **2014**, 53, 3835 (“Hot” article)

39. Direct three-dimensional imaging of polymer–water interfaces by nanoscale hard X-ray phase tomography

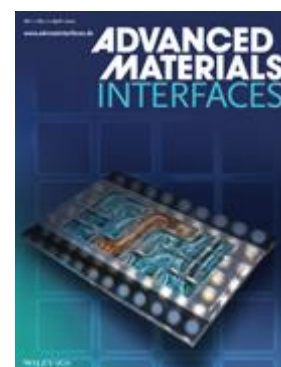
Yin Cheng, Heikki Suhonen, Lukas Helfen, Junsheng Li, Feng Xu, Michael Grunze, Pavel A. Levkin and Tilo Baumbach

Soft Matter, **2014**, 10, 2982

38. Digital Liquid Patterning: A Versatile Method for Mask-less Generation of Liquid Patterns and Gradients (inside cover)

A.N. Efremov, M. Grunze, P.A. Levkin

Advanced Materials Interfaces, **2014**, DOI: 10.1002/admi.201470009



2013

37. Liquid-infused slippery surfaces show marine anti-biofouling properties

Linlin Xiao, Junsheng Li, Sophie Mieszkina, Alessio Di Fino, Anthony S. Clare, Maureen E. Callow, James A. Callow, Michael Grunze, Axel Rosenhahn, Pavel A. Levkin

ACS Applied Materials & Interfaces, **2013**, 5, 10074–10080

36. Facile and multiple replication of superhydrophilic-superhydrophobic patterns using adhesive tape

P. Auad, E. Ueda, P.A. Levkin

ACS Applied Materials & Interfaces, **2013**, 5, 16, 8053

35. Combinatorial Library of Alkyl Amines for Gene Delivery: Combining Single with Double-Chain Lipids Enhances Cellular Transfection

Linxian Li, F. Wang, Y. Wu, G. Davidson, P.A. Levkin

J. Bioconjugate Chemistry, **2013**, 24, 1543–1551

34. Boronate-Dextran: an Acid-Responsive Biodegradable Polymer for Drug Delivery

Linxian Li, Zewei Bai, Pavel A. Levkin

Biomaterials, **2013**, 34, 8504–8510

33. The impact of liquid-infused porous polymer surfaces on the biofilm formation of different *P. aeruginosa* strains

Junsheng Li, Tanja Kleintschek, Annika Rieder, Yin Chen, Tilo Baumbach, Ursula Obst, Thomas Schwartz, and Pavel A. Levkin

ACS Applied Materials and Interfaces, **2013**, 5, 6704-6711

32. Porous Polymer Coatings as Substrates for the Formation of High-Fidelity Micropatterns by Quill-Like Pens

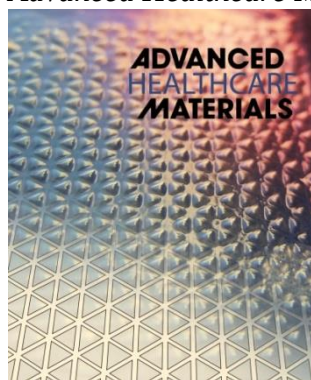
Michael Hirtz, Marcus Lyon, Wenqian Feng, Andrea E. Holmes, Harald Fuchs, and Pavel A. Levkin

Beilstein Journal of Nanotechnology, **2013**, 4, 377–384

31. Micropatterning Hydrophobic Liquid on a Porous Polymer Surface for Long-term Selective Cell-Repellency

Erica Ueda, Pavel A. Levkin

Advanced Healthcare Materials, **2013**, 2, 1425–1429



(Front Cover)

30. Formation of a Polymer Surface with a Gradient of Pore Size using a Microfluidic Chip

Kreppenhof, Kristina; Li, Junsheng; Segura, Rodrigo; Popp, Ludmilla; Rossi, Massimiliano; Tzvetkova, Pavleta; Luy, Burkhard; Kähler, Christian; Guber, Andreas; Levkin, Pavel

Langmuir, **2013**, 29, 3797-3804

29. Superhydrophobic Borders for Patterning Multiple Cell Types and Studying Cell-Cell Communication in vitro

A.N. Efremov, E. Stanganello, A. Welle, S. Scholpp, P.A. Levkin

Biomaterials, **2013**, 34, 1757

28. Porous Poly(2-Octyl Cyanoacrylate): a Facile One-Step Preparation of Superhydrophobic Coatings on Different Substrates

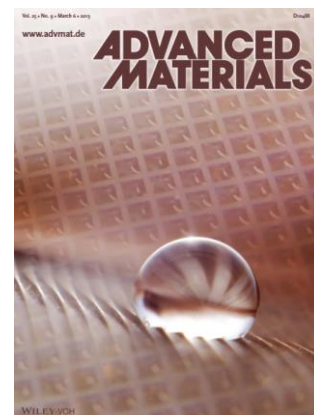
Xin Du, Junsheng Li, Linxian Li, Pavel A. Levkin

J. Mater. Chem. A, **2013**, 1, 1026-1029

27. Emerging Applications of Superhydrophilic-Superhydrophobic Micropatterns

Erica Ueda and Pavel A. Levkin

Advanced Materials, **2013**, 25, 1234-1247 (Back Cover)



26. DropletMicroarray: Facile formation of arrays of microdroplets and hydrogel micropads for cell screening applications

E. Ueda, F. L. Geyer, V. Nedashkivska, P. Levkin
Lab on a Chip **2012**, 2012, 12, 5218

25. A Practical Method for the Quantitative Assessment of Non-enantioselective versus Enantioselective Interactions Encountered in Liquid Chromatography on a Brush-type Chiral Stationary Phase

P.A. Levkin, N.M. Maier, W. Lindner, V. Schurig
Journal of Chromatography A, **2012**, 1269, 270-278

24. A biomimetic lipid library for gene delivery through thiol-yne click chemistry

L. Li, D. Zahner, Y. Su, C. Gruen, G. Davidson, P.A. Levkin
Biomaterials **2012**, 33, 8160-8166

23. Printable Superhydrophilic-Superhydrophobic Micropatterns Based on Supported Lipid Layers

J.S. Li, E. Ueda, A. Nallapaneni, L.X. Li, P.A. Levkin
Langmuir **2012**, 28, 8286-8291

2011

22. Superhydrophobic-Superhydrophilic Micropatterning: Towards Genome-on-a-Chip Cell Microarrays

F. Geyer, E. Ueda, U. Liebel, N. Grau, P.A. Levkin
Angew. Chem. Int. Ed. **2011**, 50, 8424-8427. "Hot Paper"

21. A Facile Approach to Superhydrophilic-Superhydrophobic Patterns in Porous Polymer Films

D. Zahner, J. Abagat, F. Svec, J.M.J. Frechet, P.A. Levkin
Adv. Mater. **2011**, 23, 3030-3034

20. Polymerisation and surface modification of methacrylate monoliths in polyimide channels and polyimide coated capillaries using 660 nm light emitting diodes

Z. Walsh, P.A. Levkin, S. Abele, S. Scarmagnani, D. Heger, P. Klan, D. Diamond, B. Paull, F. Svec, M. Macka
J. Chromatogr. A, 1218 (**2011**), 2954-2962

2010

19. Strong detrimental effect of a minute enantiomeric impurity of a chiral selector on the enantioselectivity factor

P.A. Levkin, N.M. Maier, V. Schurig, W. Lindner
Angewandte Chemie Int. Ed. **49** (**2010**), 7742-7744

18. Monolithic Superhydrophobic Polymer Layer with Photopatterned Virtual Channel for the Separation of Peptides Using Two-Dimensional Thin Layer Chromatography-Desorption Electrospray Ionization Mass Spectrometry

Y. Han, P.A. Levkin, I. Abarientos, H. Liu, F. Svec, J.M.J. Frechet
Analytical Chemistry, 82 (**2010**), 2520-2528

17. Visible light initiated polymerization of styrenic monolithic stationary phases using 470 nm light emitting diode arrays

Z. Walsh, P.A. Levkin, V. Jain, B. Paull, F. Svec, and M. Macka
J. Sep. Sci. 33 (2010), 61-66

2002-2009

16. Porous polymer coatings: a versatile approach to superhydrophobic surfaces

P.A. Levkin, F. Svec, J.M.J. Fréchet
Adv. Funct. Mater. 19 (2009), 1993-1998

15. Monolithic porous polymer stationary phases in polyimide chip for fast HPLC separation of proteins

P.A. Levkin, S. Eeltink, T.R. Stratton, R. Brennen, K. Killeen, F. Svec, J.M.J. Fréchet
Journal of Chromatography A 1200 (2008), 55-61

14. Apparent and true enantioselectivity of single- and binary-selector chiral stationary phases in gas chromatography

P.A. Levkin and V. Schurig
Journal of Chromatography A (invited paper in 50th anniversary issue) 1184 (2008), 309-322

13. Heptakis[6-*O*-(*n*-acetylyl-L-valine-*tert*-butylamide)-2,3-di-*O*-methyl]- β -cyclodextrin: a new multifunctional cyclodextrin with improved enantiodiscriminating efficiency towards polar and apolar substrates

G. Uccello-Barretta, S. Nazzi, F. Balzano, P.A. Levkin, V. Schurig, P. Salvadori
European Journal of Organic Chemistry (2007), 3219-3226

12. Sterically hindered and completely arrested nitrogen inversion in pyrazolidines

S.V. Usachev, G.A. Nikiforov, K.A. Lyssenko, Y.V. Nelubina, P.A. Levkin, R.G. Kostyanovsky
Tetrahedron-Asymmetry 18 (2007), 1540-1547

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