

Curriculum vitae

PD Dr. Pavel A. Levkin

17.07.1980, married, three children

Karlsruhe Institute of Technology (KIT)
Institute of Toxicology and Genetics
Institute of Organic Chemistry
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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 |
| PD | Habilitation in Organic Chemistry, KIT | 2016 |
| 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

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| 2017-2019 | EXIST Forschungstransfer Grant | 1,2M€ |
| 2017 | ERC Proof-of-Concept Grant, CellPrintArray | 150K€ |
| 2015 | ERC Proof-of-Concept Grant, CellScreenChip | 150K€ |
| 2014 | Helmholtz ERC-Prämie | |
| 2014-2018 | ERC Starting Grant (DropCellArray-337077) | 1,5M€ |
| 2012 | Helmholtz-Sonderförderung Grant | |
| 2011 | Helmholtz-Enterprise Grant | 200T€ |
| 2010 | Young Investigators Network Start-up grant | |
| 2009-2014 | Helmholtz-University Young Investigator Group Grant, | 1,25M€ |

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, Horizon Materials Bio, Advanced Functional Materials

Teaching activities

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

Lectures

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| 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

- **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



- **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
- **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