


## Curriculum Vitae

<p><b>Prof. Andrey L. Rogach</b>, Dipl.-Chem., Ph.D., Dr. habil.</p> <p>Director, Centre for Functional Photonics (CFP)  Chair Professor of Photonic Materials  Department of Physics and Materials Science  City University of Hong Kong  Tat Chee Avenue  Hong Kong  Tel: +852-3442-9532; Fax: +852-3442-0538  Email: andrey.rogach@cityu.edu.hk</p>	
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### (1) Education

University of Munich, Germany	Habilitation	2009	Physics
Belarusian State University, Minsk, Belarus	Ph.D.	1995	Physical Chemistry
Belarusian State University, Minsk, Belarus	Diploma (honor)	1991	Chemistry

### (2) Professional Experience

since 2012	Department of Physics and Materials Science, City University of Hong Kong Chair Professor of Photonics Materials
since 2010	Centre for Functional Photonics, City University of Hong Kong Founding Director
2009-2012	Department of Physics and Materials Science, City University of Hong Kong Professor
since 2008	School of Physics & School of Chemistry, Trinity College Dublin (Ireland) Adjunct Professor (honorable appointment)
2005-2006	School of Physics & Department of Clinical Medicine, Trinity College Dublin (Ireland) SFI Walton Visiting Professor
2002-2009	Physics Department & Center for NanoScience, Ludwig-Maximilians University Munich (Germany) Lead Scientist
1995-2002	Institute of Physical Chemistry, University of Hamburg (Germany) Research Fellow
1991-1995	Physico-Chemical Research Institute, Belarusian State University, Minsk (Belarus) Junior Research Fellow

### (3) Research interests

Nanotechnology: Synthesis, assembly and optical spectroscopy of nanomaterials and their applications in energy and biology related fields (solar cells, LEDs, photocatalytic hydrogen generation; luminescent marking).

### (4) Representative publications (out of 2 edited books, >240 refereed journal publications and 7 book contributions, sum of citations >16000, *h*-factor 67)

1. **A. L. Rogach** (Editor), Semiconductor Nanocrystal Quantum Dots: Synthesis, Assembly, Spectroscopy and Applications, SpringerWienNewYork, 2008.
2. **A. L. Rogach**, J. Lupton. Hybrid OLEDs with Semiconductor Nanocrystals. In: "Organic Light-Emitting Devices", Eds. K. Müllen, U. Scherf. WILEY-VCH, Weinheim, 2005, pp. 319-332.

3. I. Mora-Sero, J. Bisquert, Th. Dittrich, A. Belaidi, A. S. Sussha, **A. L. Rogach**. Photosensitization of TiO<sub>2</sub> Layers with CdSe Quantum Dots: Correlation between Light Absorption and Photoinjection. *J. Phys. Chem. C* 2007, 111, 14889-14892.
4. E. Holder, N. Tessler, **A. L. Rogach**. Hybrid Opto-Electronic Devices with Organic and Inorganic Components. *J. Mater. Chem.* 2008, 18, 1064-1078.
5. D. Gross, A. S. Sussha, T. A. Klar, E. Da Como, **A. L. Rogach**, J. Feldmann. Charge Separation in Type II Tunneling Structures of Close-Packed CdTe and CdSe Nanocrystals. *NanoLett.* 2008, 8, 1482-1485.
6. I. Mora-Sero, Th. Dittrich, A. S. Sussha, **A. L. Rogach**, J. Bisquert. Large Improvement of Electron Extraction from CdSe Quantum Dots into a TiO<sub>2</sub> Thin Layer by N3 Dye Coabsorption. *Thin Solid Films* 2008, 516, 6994-6998.
7. **A. L. Rogach**, N. Gaponik, J. M. Lupton, C. Bertoni, D. E. Gallardo, S. Dunn, N. Li Pira, M. Paderi, P. Repetto, S. G. Romanov, C. O'Dwyer, C. M. Sotomayor Torres, A. Eychmüller. Light-Emitting Diodes with Semiconductor Nanocrystals. *Angew. Chem. Int. Ed.* 2008, 47, 6538-6549.
8. **A. L. Rogach**, T. A. Klar, J. M. Lupton, A. Meijerink, J. Feldmann. Energy Transfer with Semiconductor Nanocrystals. *J. Mater. Chem.* 2009, 19, 1208-1221.
9. S. Chanyawadee, R. T. Harley, D. Taylor, M. Henini, A. S. Sussha, **A. L. Rogach**, P. G. Lagoudakis. Efficient Light Harvesting in Hybrid CdTe Nanocrystal / Bulk GaAs *p-i-n* Photovoltaic Devices. *Appl. Phys. Lett.* 2009, 94, 233502.
10. A. A. Lutich, G. Jiang, A. S. Sussha, **A. L. Rogach**, F. D. Stefani, J. Feldmann. Energy Transfer versus Charge Separation in Type-II Hybrid Organic-Inorganic Nanocomposites. *NanoLett.* 2009, 9, 2636-2640.
11. I. Mora-Sero, D. Gross, T. Mittereder, A. A. Lutich, A. S. Sussha, T. Dittrich, A. Belaidi, R. Caballero, F. Langa, J. Bisquert, **A. L. Rogach**. Nanoscale Interaction between CdSe or CdTe Nanocrystals and Molecular Dyes Fostering or Hindering Directional Charge Separation. *Small* 2010, 6, 221-225.
12. D. Gross, I. Mora-Sero, T. Dittrich, A. Belaidi, C. Mauser, A. J. Houtepen, E. Da Como, **A. L. Rogach**, J. Feldmann. Charge Separation in Type II Tunneling Multilayered Structures of CdTe and CdSe Nanocrystals Directly Proven by Surface Photovoltage Spectroscopy. *J. Am. Chem. Soc.* 2010, 132, 5981-5983.
13. M. Berr, A. Vaneski, A. S. Sussha, J. Rodríguez-Fernández, M. Döblinger, F. Jäckel, **A. L. Rogach**, J. Feldmann. Colloidal CdS Nanorods Decorated with Subnanometer Sized Pt Clusters for Photocatalytic Hydrogen Generation. *Appl. Phys. Lett.* 2010, 97, 093108.
14. C. Luan, A. Vaneski, A. S. Sussha, X. Xu, H.-E. Wang, X. Chen, J. Xu, W. Zhang, C.-S. Lee, **A. L. Rogach**, J. A. Zapien. Facile Solution Growth of Vertically Aligned ZnO Nanorods Sensitized with Aqueous CdS and CdSe Quantum Dots for Photovoltaic Applications. *Nanoscale Research Lett.* 2011, 6, 340.
15. A. Vaneski, A. S. Sussha, J. Rodriguez-Fernandez, M. Berr, F. Jäckel, J. Feldmann, **A. L. Rogach**. Hybrid Colloidal Heterostructures of Anisotropic Semiconductor Nanocrystals Decorated with Noble Metals: Synthesis and Function. *Adv. Funct. Mater.* 2011, 21, 1547-1556.
16. S. Giménez, **A. L. Rogach**, A. A. Lutich, D. Gross, A. Poeschl, A. S. Sussha, I. Mora-Seró, T. Lana-Villarreal, J. Bisquert. Energy Transfer versus Charge Separation in Hybrid Systems of Semiconductor Quantum Dots and Ru-Dyes as Potential Co-Sensitizers of TiO<sub>2</sub>-based Solar Cells. *J. Appl. Phys.* 2011, 110, 014314.
17. F. Hetsch, X. Xu, H. Wang, S. V. Kershaw, **A. L. Rogach**. Semiconductor Nanocrystal Quantum Dots as Solar Cell Components and Photosensitizers: Material, Charge Transfer, and Separation Aspects of Some Device Topologies. *J. Phys. Chem. Lett.* 2011, 2, 1879-1887.
18. **A. L. Rogach**. Fluorescence Energy Transfer in Hybrid Structures of Semiconductor Nanocrystals. *Nano Today* 2011, 6, 355-365.
19. M. J. Berr, A. Vaneski, C. Mauser, S. Fischbach, A. S. Sussha, **A. L. Rogach**, F. Jäckel, J. Feldmann. Delayed Photoelectron Transfer in Pt-decorated CdS Nanorods under Hydrogen Generation Conditions. *Small* 2012, 8, 291-297.

20. N. Yaacobi-Gross, N. Garphunkin, O. Solomeshch, A. Vaneski, A. S. Sussha, **A. L. Rogach**, N. Tessler. Combining Ligand-Induced Quantum-Confined Stark Effect with Type II Heterojunction Bilayer Structure in CdTe and CdSe Nanocrystal-Based Solar Cells. *ACS Nano* 2012, 6, 3128-3133.

#### (5) Awards

- Ranked 51<sup>th</sup> worldwide among “100 TOP MATERIALS SCIENTISTS OF THE PAST DECADE by *Thomson Reuters* (2011)
- Ranked 8<sup>th</sup> worldwide among “20 TOP AUTHORS PUBLISHING ON NANOCRYSTALS IN THE PAST DECADE” by *Thomson Scientific, Essential Science Indicators* (2007).
- Grand Research Excellence Award of City University of *Hong Kong* (2011); Walton Award of the *Science Foundation Ireland* (2005); Alexander-von-Humboldt Fellowship (*Germany*, 2000); National Research Council COBASE Fellowship (*USA*, 1999); British Telecom Short-Term Research Fellowship (*UK*, 1998); German Academic Exchange Foundation (DAAD) Fellowship (*Germany*, 1995).

#### (6) Synergistic Activities and Service to Community (representative)

1. **Associate Editor**, ACS NANO
2. **Editorial Board**, *Advances in Natural Sciences: Nanoscience and Nanotechnology* (IOP); *Nano Biomedicine and Engineering* (Shanghai Jiaotong University); *Nanobiosensors in Disease Diagnosis* (Dove Press); *Advanced Functional Materials* (Wiley); *Particle and Particle System Characterisation* (Wiley)
3. **Scientific Advisory Board**, University of Science and Technology of Hanoi (USTH); EU 7<sup>th</sup> Framework project NAMDIATREM
4. **Conference Organizer**, “Nanoscience with Nanocrystals” (NaNaX 1 - 2003, Munich, Germany; NaNaX 2 - 2006, Grenoble, France; NaNaX 4 - 2010, Munich, Germany; NaNaX 6 - 2014, Bad Hofgastein, Austria); Symposium “Excitons and Plasmon Resonances in Nanostructures - Fundamentals, Synthesis, and Applications – I, II, III”, MRS Fall Meetings 2007, 2009, 2012, Boston, MA, USA.
5. **Reviewer**, *ACS Nano*, *Acc. Chem. Research*, *Adv. Mater.*, *Angew. Chemie*, *Appl. Phys. Lett.*, *Chem. Comm.*, *Chem. Soc. Rev.*, *Chem. Eur. J.*, *Chem. Mater.*, *Chem. Phys. Chem.*, *Curr. Opinions Coll. Interf. Sci.*, *Dalton Trans.*, *Energy Environm. Sci.*, *Eur. J. Inorg. Chem.*, *Europhys. Lett.*, *J. Am. Chem. Soc.*, *J. Mater. Chem.*, *J. Phys. Chem.*, *Langmuir*, *NanoToday*, *NanoLett.*, *Nanomedicine*, *Nanoscale*, *Nanoscale Res. Lett.*, *PhysChemChemPhys*, *Small*
6. **Reviewer**, European Commission's 7th Framework Program, Deutsche Forschungsgemeinschaft (DFG), France's National Research Agency (ANR), UK Engineering and Physical Sciences Research Council (EPSRC), Dutch Technology Foundation (STW), Science Foundation Ireland (SFI), Swiss National Science Foundation, National Research Foundation (Singapore), *etc.*