REGIONAL CENTRE OF ADVANCED TECHNOLOGIES AND MATERIALS

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REGIONAL CENTRE OF ADVANCED TECHNOLOGIES AND MATERIALS
HONORARY LECTURE SERIES

香港城市大學
City University of Hong Kong

General Director of RCPTM cordially invites you to the lecture
in the framework of newly established **RCPTM HONORARY LECTURE SERIES**
This talk will be delivered by

Prof. Andrey L. Rogach
(City University of Hong Kong)

„Functional Hybrid Structures of Semiconductor and Metal Nanocrystals"

Thursday, November 14, 12:30, assembly hall of Faculty of Science,
17. listopadu 12, Olomouc.

Andrey L. Rogach is a Chair Professor of Photonics Materials at the Department of Physics and Materials Science, City University of Hong Kong, and a Director of the Centre for Functional Photonics at CityU. He received his Ph.D. in chemistry (1995) from the Belarusian State University in Minsk, and worked at the University of Hamburg (Germany) from 1995 to 2002. From 2002–2009 he was a lead staff scientist at the Ludwig-Maximilians-Universität in Munich (Germany), where he completed his habilitation in experimental physics. Since 2008 he is also an Adjunct Professor at Trinity College Dublin (Ireland). His research focuses on synthesis, assembly and optical spectroscopy of colloidal semiconductor and metal nanocrystals and their hybrid structures, and their use for energy transfer, light harvesting, and biosensing. He has published over 250 papers and book contributions in these areas, which have been cited more than 15,000 times so far (h-index 66). His name is on the list of Top 100 Materials Scientists and on the list of Top 20 Authors publishing on nanocrystals in the past decade by Thomson Reuters, ISI Essential Science Indicators. Andrey Rogach is an Associate Editor of ACS Nano.

Abstract: Semiconductor and metal nanocrystals of different sizes, shapes and compositions can nowadays be synthesized in large quantities by inexpensive and versatile solution based approaches. They are attractive for use as building blocks in different functional nanostructures. We provide an overview of strongly emissive semiconductor nanocrystals as well as noble metal nanoparticles of different shapes synthesized in our labs and demonstrate several approaches for nanocrystal's assembly. Advanced optical spectroscopy provides important insights into fundamental photophysical properties of semiconductor nanostructures. Different application aspects of functional structures based on semiconductor and/or metal nanocrystals ranging from energy transfer structures to biological markers will be discussed.