



Application of Advanced Quantum Dots Films in Optoelectronics

Guest Editors:

Prof. Philippe Guyot-Sionnest

James Franck Institute, The
University of Chicago, Chicago, IL
60637, USA

Dr. Xin Tang

School of Optics and Photonics,
Beijing Institute of Technology,
Beijing, China

Deadline for manuscript
submissions:

closed (31 December 2022)

Message from the Guest Editors

Dear Colleagues,

The scope of this Special Issue is to provide a platform to researchers from both the academy and industry to share their state-of-the-art developments in the very fast-growing field of optoelectronics. The contributed papers can be original research articles, letters, and reviews of the latest research dealing with both fundamental aspects and technological applications of CQD optoelectronics.

Topics of interest include but are not limited to the following:

- Synthesis of colloidal quantum dots;
- Characterization of structures, chemical compositions, surface, and transport properties;
- Design, fabrication, and modeling of colloidal quantum-dot photoconductors, photovoltaics, and phototransistors;
- Design, fabrication, and modelling of colloidal quantum-dot lasers, LEDs, and displays;
- Simulation, fabrication, and integration of metamaterials, photonic crystals, and plasmonic structures with colloidal quantum-dot optoelectronics;
- Modeling and simulation of photonic processes;
- Flexible, wearable and curved optoelectronics;
- Micro-/nanoscale patterning techniques for colloidal quantum dots.





Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New
Ceramics and Fine Processing,
School of Materials Science &
Engineering, Tsinghua University,
Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam
Mickiewicz University in Poznań,
ul. Wszechnicy Piastowskiej 3, 61-
614 Poznań, Poland

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

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Coatings Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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