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PbS Colloidal Quantum Dots and Their Applications

Guest Editor:

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Deadline for manuscript submissions:
closed (15 February 2020)

Message from the Guest Editor

Dear Colleagues,

Lead sulphide (PbS) CQDs, spanning the visible and the near infrared, are the among the most advanced colloidal materials in terms of both monodispersion and reproducibility. Over the past 20 years, CQD technology has dramatically advanced from the pioneering research and significant progress has been made in terms of both theory and experiments, with several devices demonstrating performance comparable with their bulk semiconductor counterparts. However, challenges remain to achieve full control of carrier type and concentration, mobility and defect states, as well as to improve stability under operation.

The goal of this Special Issue is to attract world-leading researchers in the area of PbS colloidal quantum dots focusing on the latest advances in both material synthesis and device fabrication and applications. Review papers, original contributions focused on material issues, new device architectures, proof-of-concept, integration and, especially, suitable and potential applications of PbS CQD-based devices are welcome.

Prof. Lorenzo Colace
Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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