Contribution ID: 91 Type: Poster

Colloidal LiYF4:Pr nanocrystals downsized to 10 nm - Part 2: spectroscopic properties

Thursday, 1 September 2022 12:00 (2 hours)

Nanocrystalline LiYF4:Pr promises exciting design opportunities for composite photonic devices. Here, we present an in-depth spectroscopic investigation on monodispersed colloidal LiYF4:Pr nanocrystals of 10nm size. We observed an unexpected yet intense emission with comparably long lifetimes. These results pave the way for applications in quantum optics or biomedicine.

Primary authors: SPELTHANN, Simon (Leibniz University Hannover, Institute of Quantum Optics, Hannover, Germany); STEINKE, Michael (Leibniz University Hannover, Institute of Quantum Optics, Hannover, Germany); KOMBAN, Rajesh (Fraunhofer Center for Applied Nanotechnology CAN - (a research division of Fraunhofer Institute for Applied Polymer Research), Hamburg, Germany); WELLER, Horst (Fraunhofer Center for Applied Nanotechnology CAN - (a research division of Fraunhofer Institute for Applied Polymer Research), Hamburg, Germany); GIMMLER, Christoph (Fraunhofer Center for Applied Nanotechnology CAN - (a research division of Fraunhofer Institute for Applied Polymer Research), Hamburg, Germany); RUEHL, Axel (Leibniz University Hannover, Institute of Quantum Optics, Hannover, Germany); RISTAU, Detlev (Leibniz University Hannover, Institute of Quantum Optics, Hannover, Germany)

Presenter: SPELTHANN, Simon (Leibniz University Hannover, Institute of Quantum Optics, Hannover, Germany)

Session Classification: Lunch and Poster Session 2