



## Luminescent Rare-Earth-Based Nanomaterials

Guest Editor:

**Dr. Łukasz Marciniak**

Institute of Low Temperature and  
Structure Research of the Polish  
Academy of Sciences, Wrocław,  
Poland

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### Message from the Guest Editor

Rare-earth-doped inorganic phosphors have been an exciting subject of research for decades due to their unique and fascinating luminescent properties, such as a strong emission intensity with sharp emission lines and long luminescent lifetimes. Their wide range of applications, including lighting, displays, scintillators, solid-state lasers, and optical storage, confirms their great importance. Doping lanthanide ions into nanoparticles not only extends the list of potential applications of rare-earth-doped phosphors but enables, among other things, the development of diagnostic and theranostic tools with unprecedented functionality. An appropriate composition, stoichiometry, and architecture of such nanoparticles will allow for the creation of multifunctional materials that combine optical temperature, pressure, and pH sensing with luminescence imaging and light-to-heat conversion. Although unparalleled and impressive, their capabilities have yet to be fully explored and understood.





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### **Prof. Dr. Shirley Chiang**

Department of Physics, University  
of California Davis, One Shields  
Avenue, Davis, CA 95616-5270,  
USA

## Message from the Editor-in-Chief

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*Nanomaterials* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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