



## Emerging Technologies for Development of Novel Materials Systems and Coatings

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### Message from the Guest Editor

New or emerging technologies for materials synthesis and processing are needed to obtain materials systems and coatings with design composition, microstructure, and architectures fulfilling the harsh requirements for applications in extreme mechanical, high-temperature, high-corrosion or biological–environmental conditions. Green chemical procedures with a low environmental impact enable finetuning of components and dopants by controlling the kinetics and mechanisms involved in the synthesis of nanostructured composite or hybrid material systems. The use of these advanced materials to obtain functionally graded materials and coating architectures may open new directions in the study of nucleation and growth processes while using physical or chemical coating technologies and controlling functional properties.

In this Special Issue, modern trends in novel material synthesis and coatings, including fundamental research, modeling, and optimization, are highlighted and discusses.

It is my pleasure to invite you to submit a manuscript to this Special Issue. Full papers, communications, and reviews are all welcome.





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## Message from the Editor-in-Chief

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