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Transition Metal Complexes and Nanomaterials for Catalysis Application

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Message from the Guest Editor

Dear Colleagues,

Transition metal-based catalysis plays a key role in chemical industry and environmental protection. Exploring the possible structure–activity relationship of transition metal-based complexes and nanomaterials in industrial process is the premise of the design and development of catalysts with high performances. Combining the in situ catalyst characterization methods with the theoretical calculation to explore the structures of catalysts under real reaction environments remains a substantial challenge and attracts much attention in catalysis. This Special Issue of *Nanomaterials* will attempt to cover the most recent advances in transition metal complexes and nanomaterials for catalysis application, concerning the synthesis, characterization, and evaluation of their catalytic performances, as well as their reaction mechanism by experimental and theoretical methods. We believe that this topic has both academic and technological importance and offers exciting new advances in transition metal-based catalysis. The format of welcomed articles includes full papers, communications, and reviews.

Prof. Dr. Botao Teng

Guest Editor



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Special Issue



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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal-organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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