Special Issue

Lignin-Based Nanocomposites: Applications, Trends and Challenges

Message from the Guest Editors

Lignin nanocomposites are also used for foods and fiber modification for textiles to improve the adhesion, hydrophobicity, antimicrobial, and antioxidative properties of the material. Moreover, lignin nanocomposites could be used as adsorbents in water purification, emulsifiers for colloids, carriers for enzymes, and controlled-release vectors for drugs and pesticides. Topics of interest for this Special Issue include, but are not limited to, the following: Synthesis and characterization of nanocomposites using technical lignins;
Nanocomposites and hybrid nanomaterials from lignin;
Functional lignin-based materials: hydrogels, nanocarriers, biosorbents, and nanoparticles;
Chemical modification of lignin to prepare tailored lignin nanostructured products;
Application of lignin nanocomposites in adhesives, resins, coatings, plasticizers, and flame retardants;
Lignin nanocomposites for application in water/wastewater treatment processes;
Lignin nanocomposites for medical implants and drug delivery;
Lignin-derived nanomaterials for renewable energy production and storage.

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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