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Waste Derived Materials for Electrocatalytic Applications

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Message from the Guest Editors

Sustainable development and a circular economy have become guiding principles for modern society, bringing a growing appreciation that anthropogenic waste can offer a valuable source of energy, chemicals, or high value functional products. A circular economy needs chemistry to provide a basis for innovative products; these are made from waste materials and designed to be reused or recycled, increasing the value of a material resource by maximising its conversion into products (high value), thus eliminating waste (low value). In the context of chemical transformations, high volume waste materials from both large-scale industrial and natural sources are attracting increasing interest in terms of catalysis. The main focus of this Special Issue is to solicit recent advances in the use of waste materials to generate electrocatalysts for energy and environmental applications, such as electrochemical reactions that take place in fuel cells, batteries, electrolyzers, or in the electrochemical reduction of CO₂. These waste materials can be directly applied as electrocatalysts themselves, or used as sources of components from which materials of electrocatalytic interest can be prepared.



