

Special Issue

Advances in Corrosion and Anticorrosion of Materials in Thermal Energy Storage Systems

Message from the Guest Editor

At present, concentrated solar power (CSP) technologies and thermal energy storage (TES) systems are gaining increasing attention as reliable and sustainable solutions for large-scale energy generation. This Special Issue aims to showcase recent advances in material development, characterization, and innovative strategies to improve the thermal efficiency, stability, and reliability of CSP and TES systems. The focus will be on novel nanomaterials, molten salt formulations, corrosion mitigation strategies, and advanced analytical techniques for understanding material behavior in extreme conditions. Suitable topics for this Special Issue include, but are not limited to, the following:

- Development and characterization of advanced molten salts and HTFs;
- Nanofluids and additive-enhanced thermal storage materials;
- Corrosion resistance strategies for CSP and TES components;
- Computational modeling of heat transfer and degradation processes;
- Novel coatings and protective barriers for high-temperature applications.

Guest Editor

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