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Advanced Materials Solutions and Architectures for a New Generation of High-Efficiency CSP Plants

Guest Editors:

Dr. Inmaculada Cañadas
CIEMAT-Plataforma Solar de Almeria, Ctra. Senes, Km 4.5, E-04200 Tabernas (Almería), Spain

Prof. Dr. Luca Turchetti
ENEA—Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Via Anguillarese 301, 00123 Rome, Italy

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Message from the Guest Editors

The development of advanced materials solutions and innovative architectures are two of the main research priorities for the advancement of the concentrating solar power (CSP) technology, and the key to improving the performance of the current systems and fostering the development of a new generation of high-efficiency CSP plants.

Novel functional materials; material combinations; advanced architectures; their development, processing, simulation and analysis, and synergies with other advanced technologies can enhance the performance and reliability of key components of CSP plants such as mirrors, receivers, thermal energy storage systems, etc., thus boosting conversion efficiencies beyond the state-of-the-art, taking into account the preservation of the lifetime and the materials resource efficiencies. In this way, it will be possible to increase the efficiency and durability of the CSP facilities and make this renewable energy technology cost-competitive under suitable electricity market conditions.

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Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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𝕏@Materials_Mdpi