

Special Issue

Surface Functionalization of Photovoltaic Materials

Message from the Guest Editors

Surface functionalization has become a transformative strategy for addressing long-standing bottlenecks in photovoltaic (PV) technology, directly impacting device efficiency, environmental durability, and scalability—key pillars for the advancement of solar energy as a dominant renewable energy source. As PV materials (silicon, perovskites, thin-film semiconductors, and organic photovoltaics) face inherent challenges such as interface charge recombination, poor resistance to UV radiation or moisture, and limited light-harvesting capabilities, tailored surface modifications offer precise solutions to mitigate these issues. This Special Issue aims to serve as a comprehensive platform for the dissemination of cutting-edge research and critical reviews that bridge fundamental insights into surface–interface chemistry with practical advancements in PV device engineering.

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About the Journal

Message from the Editorial Board

Now more than ever, research is asked to deliver knowledge and technologies to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed in the spotlight of most contemporary research. Surface science and engineering play a key role in this regard, with an incredible potential in delivering new and deep scientific understanding and technical solutions essential to solve most of the major societal challenges.

Coatings is a well-established, peerreviewed, online journal dedicated to the vibrant field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers that make the point on the hottest research topics.

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