



materials



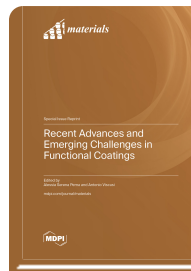
Special Issue Reprint

Recent Advances and Emerging Challenges in Functional Coatings

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Edited by
Alessia Serena Perna
Antonio Viscusi

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This Reprint gathers recent progress and perspectives in the field of functional coatings, reflecting the growing importance of surface engineering in modern materials science. As technological applications increasingly require components with properties that extend from bulk to tailored surface functionalities, coatings provide a vital means to enhance performance, durability, and adaptability in demanding environments.

The contributions collected here span theoretical analyses, numerical modeling, and experimental investigations, offering a comprehensive overview of how coatings can be designed, optimized, and characterized. The articles address key advances in coating technologies, novel application strategies, and the integration of advanced analytical tools in production. They also highlight innovative materials solutions, from protective to multifunctional coatings, that are capable of meeting the challenges posed by complex service conditions.

Together, these studies provide valuable insights into current trends and emerging directions in functional coatings, underlining their critical role in enabling sustainable and high-performance engineering applications.



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