Special Issue

Recent Advances in Thin-Film Transistors: From Design to Application

Message from the Guest Editors

Thin-film transistors (TFTs) initially transformed display technology and are now driving innovations in fields like biomedical sensing, wearable electronics, memory devices, and 3D ICs. Their advantages—such as low-cost fabrication, tunable electrical properties, and substrate compatibility—make them ideal for next-generation applications. Recent advances in semiconductor materials (e.g., high-mobility oxides, organics, 2D materials), novel architectures (e.g., vertical transistors, heterostructures), and modeling of charge transport and interfaces are pushing the boundaries of performance. Research aims to tailor these aspects for speed, sensitivity, stability, and new applications We invite original research and reviews for the Special Issue, *"Recent Advances in Thin-Film Transistors: From Design to Application"* Topics include novel materials and scalable architectures, charge transport modeling and reliability, advanced display technologies, and emerging applications in biomedical, neuromorphic, memory, and 3D IC fields applications.

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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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