

Special Issue

Thin Film Development for Autonomous Computing Materials and Devices

Message from the Guest Editor

Conventional materials are reaching their limits in computation, sensing, data storage capabilities, performing simultaneous, integrated sensing, computation, data storage and retrieval. In contrast, the human brain is capable of multimodal sensing, complex computation, and both short and long-term data storage simultaneously, with near instantaneous rate of recall, seamless integration, and minimal energy consumption. Such materials would offer transformative opportunities for distributed, multimodal sensing, computation, and data storage in biological and other unconventional environments, including interfacing with biological sensors and computers, such as the brain.

- Layer development for Emerging and autonomous computing materials and devices;
- Thin film development for large-scale high performance computing devices and small portable devices and capable of being integrated into fabrics and the environment;
- Thin film development for new, biologically inspired paradigms implementing emerging architectures, with hybrid circuits and systems that combine the best features of scaled silicon CMOS with new devices, physical interactions, and materials.

Guest Editor

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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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