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# Thin Film Development for Autonomous Computing Materials and Devices

Guest Editor:

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Conventional materials are reaching their limits in sensing, computation. 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 biological and other unconventional storage in 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.









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Now more than ever, research is called for to produce technologies and improve knowledge 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 at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. Coatings is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. Coatings publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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