Special Issue

Recent Advances in CMP Slurries and Post-CMP Cleaning

Message from the Guest Editors

Semiconductor technology has grown rapidly in recent decades as emerging technologies such as autonomous driving, artificial intelligence (AI), 5G communications, the Internet of Things (IoT), and large-scale data processing are increasingly integrated into our daily lives. Semiconductor innovation is a key driver of progress in many of these emerging technologies. Chemical mechanical planarization (CMP) is one of the most critical processes for high-volume and high-yield semiconductor manufacturing. CMP has evolved and become increasingly sophisticated over the years and has enabled the development of state-of-the-art semiconductor devices. One of the current goals of CMP is to accelerate the discovery of new materials and their integration into semiconductor manufacturing, which requires an understanding of the fundamental principles of materials and their performances during the CMP process. This Special Issue will cover recent advances in our fundamental understanding, advanced technologies, and new material development with a focus on CMP slurries and post-CMP cleaning for advanced technology nodes.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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