

Special Issue Reprint

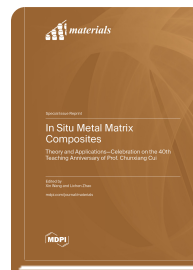
In Situ Metal Matrix Composites

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Professor Chunxiang Cui, as one of the first Chinese scholars to pay attention to in situ synthesis theory, has been engaged in the research of MMCs for a long time. He retraced the idea of in situ synthesis from the field of composite design to the field of metallurgy, proposed the concept of in situ composite inoculant (or master alloy) which is prepared by nanocrystallization and used as modifying and refining agents to modify and refine aluminum alloys, titanium–aluminum alloys, and alloy steels. This new concept was applied in improving the traditional metal metallurgy technology, effectively improving the metallurgical quality and service performance of common metal materials. This academic idea has aroused great attention in the field of iron and steel metallurgy, and has inspired a series of new developments in the current era of traditional technologies, such as inoculation or modification.

Professor Chunxiang Cui, as one of the first to attain a major in Material Science and Engineering in China, has been engaged in the field of higher education for 40 years. In order to celebrate the 40th anniversary of Professor Chunxiang Cui becoming a teacher, we announced this commemorative Special Issue.

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