



materials



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Materials Behavior under Compression

Guest Editor:

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Message from the Guest Editor

Pressure can induce dramatic changes in materials and give us a much broader field to search for new phases with enhanced properties. Pressure also serves as a smooth and clean tuning parameter that could improve our basic understanding of existing materials at different levels of atomic and molecular interactions. These materials can vary from crystalline to amorphous phases at macro–meso–nano scales and display different dimensionalities. The advent and development of the diamond anvil cell technology and concurrent breakthroughs in next-generation synchrotron, neutron, and laser facilities offer numerous opportunities to probe samples over a wide pressure–temperature space at the relevant energy, spatial, and temporal scales. The experimental approach and theoretical simulations alone or in combination have provided fruitful results for advancing the understanding on the key problems in high-pressure physics, chemistry, materials sciences, and geosciences. This is a prime time to be involved in the transformative science associated with the pressure dimension.



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Special Issue



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Message from the Editor-in-Chief

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