



High-Pressure Materials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Advances in high pressure experimental and computational techniques now allow discovering and exploring new regimes in the material phase space. In recent years, using high pressure methods, many new states of matter have been observed in laboratory and many more have been predicted theoretically and confirmed experimentally.

Pressure changes the fundamental interactions at the electron level, therefore, application of high pressure is a powerful tool for altering the chemical character of materials. The change in chemical reactivity and nature of chemical bonds can not only alter the band and crystal structure and basic electronic properties, but also lead to the emergence of various interesting quantum states. These include topological states, unconventional superconducting states and formation of electriles. The time evolution and dynamics of phase transition is another research area with much potential.

This Special Issue will explore the forefront of high pressure research theory and experiments to gain an in-depth insight into the fundamental interactions in materials and explore new possibilities in condensed matter.

Prof. Shanti Deemyad

Guest Editor





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Message from the Editor-in-Chief

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