

## **High-pressure studies of transition metal compounds located near the insulator-metal borderline**

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Experimental high pressure studies of crystalline phases take advantage of numerous recent developments in diamond-anvil-cell techniques. Major advances have occurred in microscopic analytical methods that utilize synchrotron x-ray radiation (diffraction and inelastic scattering), optical spectroscopies, and synchrotron infrared spectroscopy. Concerning correlated electron systems, the subjects of interest range from pressure-induced structural changes to illuminating the interplay between more subtle changes in atomic arrangements, electron delocalization, magnetism, and superconductivity. Some recent results will be highlighted in this presentation. The main focus will be on structural and electronic properties of perovskite-related transition metal oxides located near the insulator-metal borderline, specifically titanates and vanadates. New findings for cuprate superconductors and Fe-based pnictides will be addressed briefly.

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