Refractory minerals and materials

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Refractories and phases that compose them are materials that are resistant to high temperature, used predominantly for elevated temperature materials processing (e.g., furnace linings, thermal protection system materials) and other high-tech applications in which thermomechanical properties are critical. These peculiar materials are also found in terrestrial or extraterrestrial settings, as for instance the refractory inclusions of primitive meteorites that are the oldest preserved solids of our Solar system. The present session will report on advances in the field concerning the discovery of new minerals or refractory materials, their modes of formation and synthesis, new methods of characterization, as well as the modeling approaches for describing their properties.