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原始惑星系円盤における硫化鉄形成
Iron sulfide formation in protoplanetary disks

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Sulfur is a major volatile element in the solar system, and it shows various degrees of depletion in chondrites reflecting fractionation of volatile elements between solids and gas in the early solar system. Elemental fractionation of volatile elements may be attributed to incomplete condensation of volatiles into solids due to dispersal of disk gas. In order to discuss incomplete condensation of volatiles, it is of much importance to understand kinetics of volatile condensation, i.e., sulfidation kinetics of metallic iron in case of sulfur. I will report results on kinetics of nucleation and growth of iron sulfide on Fe matal, and discuss its effects on cosmochemical fractionation.

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