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talk

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### **Mechanochemical Synthesis of Isomorphously Substituted Spinel**

A mechanochemical pathway was successfully applied to the synthesis of simple and isomorphously doped spinels. The ball milling used for the spinel formation reactions were studied in particular for they were shown to deviate in predicted product formation and crystallinity based on enthalpies of reaction. Emissive dopants were incorporated successfully into the spinels producing cathodoluminescent properties and elucidating cation placement in the material. An application of spinels to ceramic glazes was also explored for novel tint and texture properties.