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PROCEEDINGS

A Few Key Scientific Advances of MGE

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ABSTRACT

Material genes could be understood as the relationship between composition (element, valence state, function group, etc.), structure (lattice, molecular weight, defect, etc.), thermodynamic parameters (temperature, time, pressure, etc.) and physical properties, represented as materials phase diagrams [1-3]. I will discuss 1) a recently developed an optical plasma resonance spectrum method to characterize the electrical transport properties; 2）the progress in studying dynamic phase diagrams；3）the progress using advanced neural network algorisms to predict materials key properties.

KEYWORDS

Materials phase diagrams, optical plasma resonance spectrum, dynamic phase diagrams, neural networks

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