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Timothy J. Truster, Arif Masud

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## **A Unified Mixture Formulation for Density and Volumetric Growth of Multi-Constituent Solids in Tissue Engineering**

**Timothy Truster and Arif Masud**

### **Highlights**

1. Unified mixture formulation for both growth at constant density and growth at constant volume
2. Lagrange multiplier treatment of traction boundary conditions for mixture theory
3. Constitutive model and numerical method for inter-constituent interactive force field

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