Processing Challenges for Sustainability in Energy, Environment and Materials

Douglas W. Fuerstenau

Dept. of Materials Science and Engineering, University of California Berkeley, CA 94720, USA

Abstract

The triangular relationship between mineral resources, energy consumption and environmental damage is examined. Problems facing the mineral industry due to the challenge of world population, increasing materials consumption, decreasing resources and environmental constraints can be viewed in terms of the mineral resources triangle. Further understanding can be achieved by assessing these problems through consideration of the materials cycle. Mineral processing technology has a definite role in meeting some of these challenges.