

## Reactive Processing of Dense $\text{MgB}_2$ Superconductor from Mg-2B Powder Blend

I. Zlotnikov, I. Gotman, and E.Y. Gutmanas

*Faculty of Materials Engineering, Technion-IIT, Haifa 32000, Israel*

Synthesis of bulk  $\text{MgB}_2$  superconductor from Mg-2B powder blend is reported. Reactive forming (thermal explosion under 80 Mpa pressure) yielded a relatively porous single-phase  $\text{MgB}_2$  material. Reactive hot pressing (1000°C, 200 MPa, 1 h) produced 98% dense  $\text{MgB}_2$ - $\text{MgB}_4$ -MgO multiphase specimens that, nevertheless, exhibited superconductive transition at 39 K.