

**THEORY OF THERMODIFFUSION IN MOLTEN SEMICONDUCTOR-METAL MIXTURES AND
ITS APPLICATIONS IN MEMS AND SOLAR CELL FABRICATION**

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SUMMARY: In this paper, thermodiffusion (thermomigration) and convection are investigated in a binary molten semiconductor-metal mixture, which is locally present in the zone melting temperature gradient (ZMTG) method. This method is used to fabricate semiconductor devices and solar cells. Linear nonequilibrium thermodynamics is used here to study thermodiffusion, whereas convection is studied numerically.