Editorial

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This special issue reflects the many challenges in developing electronic materials for harsh environments. The industrial importance of this emerging research area is described in the lead article, *A Review of High Temperature Electronics Technology and Applications* by J. Watson and G. Castro, Analog Devices Inc. Their review provides an ideal introduction to the subject, it describes a wide range of high temperature applications, addresses underlying problems and examines established and emerging technologies. The need to develop electronic materials that can operate well beyond 200 °C is further emphasised in, *High Temperature Capacitors and Transient Liquid Phase Interconnects for Pb-Solder Replacement* where J. Bultitude and colleagues at KEMET Electronics Corporation

describe the demands on new dielectric materials and packaging technologies for the growing market in power electronics, as well as in control and sensing electronics for deep-well drilling and aerospace industries. Further contributions on interconnects, piezoelectrics and magnetic materials from academia and industry reflect the wide-ranging nature of this topical research area.

The guest editors express their sincere thanks and appreciation to all who have contributed to the issue, and look forward to exciting future developments in response to the many scientific and technological challenges encountered in developing new materials for harsh environments, whether this be extremes of temperature or exposure to ionising radiation.

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