**DESCRIPTION**

*Materials Science in Semiconductor Processing* provides a unique forum for the discussion of novel processing, applications and theoretical studies of functional materials and devices for (opto)electronics, sensors, detectors, biotechnology and green energy.

Each issue will aim to provide a snapshot of current insights, new achievements, breakthroughs and future trends in such diverse fields as microelectronics, energy conversion and storage, communications, biotechnology, (photo)catalysis, nano- and thin-film technology, hybrid and composite materials, chemical processing, vapor-phase deposition, device fabrication, and modelling, which are the backbone of advanced semiconductor processing and applications.

Coverage will include: advanced lithography for submicron devices; etching and related topics; ion implantation; damage evolution and related issues; plasma and thermal CVD; rapid thermal processing; advanced metallization and interconnect schemes; thin dielectric layers, oxidation; sol-gel processing; chemical bath and (electro)chemical deposition; compound semiconductor processing; new non-oxide materials and their applications; (macro)molecular and hybrid materials; molecular dynamics, ab-initio methods, Monte Carlo, etc.; new materials and processes for discrete and integrated circuits; magnetic materials and spintronics; heterostructures and quantum devices; engineering of the electrical and optical properties of semiconductors; crystal growth mechanisms; reliability, defect density, intrinsic impurities and defects.

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INTRODUCTION
Materials Science in Semiconductor Processing provides a unique and much needed forum for the discussion of experimental and theoretical materials research stimulated by and applied to semiconductor processing.

Each issue will aim to provide a snapshot of current comprehension, new achievements, breakthroughs and future trends in such fields as ion implantation, diffusion and gettering, process and equipment modelling, metallization and interconnects, packaging, etc, which are the backbone of semiconductor device processing.

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