



# MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING

Functional Materials for (Opto)electronics, Sensors, Detectors, Biotechnology, and Green Energy.

## AUTHOR INFORMATION PACK

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### DESCRIPTION

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### AUDIENCE

For materials scientists, applied solid state physicists, surface scientists, electrochemists, electronic engineers.

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*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.

Coverage will include: advanced lithography for submicron devices; etching and related topics; ion implantation for dopant engineering; damage evolution and related issues; plasma and thermal CVD; rapid thermal processing; ultra low energy implantation: physics, limitations and perspectives; gettering procedures for ULSI; advanced metallization and interconnects schemes; thin dielectric layer, oxidation; cleaning procedures for ULSI devices; compound semiconductor processing; physical modelling of processing (ion implantation, metal deposition, oxidation, etching, etc.): molecular dynamics, ab-initio methods, Monte Carlo, etc.; new physical models in commercial simulation platforms for the design and modelling of advanced devices; equipment modelling; new materials and processes for discrete and integrated circuits; heterostructures and quantum devices; engineering of the electrical and optical the properties of semiconductors; crystal growth: mechanisms, reliability, defect density intrinsic impurities and defects.

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Reference to a book:

[2] W. Strunk Jr., E.B. White, *The Elements of Style*, fourth ed., Longman, New York, 2000.

Reference to a chapter in an edited book:

[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), *Introduction to the Electronic Age*, E-Publishing Inc., New York, 2009, pp. 281–304.

Reference to a website:

[4] Cancer Research UK, Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/>, 2003 (accessed 13 March 2003).

Reference to a dataset:

[dataset] [5] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, *Mendeley Data*, v1, 2015. <https://doi.org/10.17632/xwj98nb39r.1>.

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