

Applied Mathematics and
Mathematical Computation 3

Material Inhomogeneities in Elasticity

G rard Maugin



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Material Inhomogeneities In Elasticity

Gérard A. Maugin



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Anisotropy and Inhomogeneity in Elasticity and Plasticity Yves Christian Angel,1993 *Mechanics of Asphalt: Microstructure and Micromechanics* Linbing Wang,2010-10-08 A State of the Art Guide to the Mechanics of Asphalt Concrete Mechanics of Asphalt systematically covers both the fundamentals and most recent developments in applying rational mechanics microstructure characterization methods and numerical tools to understand the behavior of asphalt concrete AC The book describes the essential mathematics mechanics and numerical techniques required for comprehending advanced modeling and simulation of asphalt materials and asphalt pavements Filled with detailed illustrations this authoritative

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Multi-functional Materials and Structures Alan Kin Tak Lau, J. Lu, Vijay K. Varadan, Fu-Kuo Chang, J.P. Tu, Pou Man Lam, 2008-06-12 Selected peer reviewed papers from International Conference on Multifunctional Materials and Structures July 28 31 2008 Hong Kong P R China **Structure, Deformation, and Integrity of Materials: Plasticity, visco-elasticity, and fracture** G. de With, 2006 *Journal of the Mechanical Behavior of Materials*, 2000

Mechanics of Electromagnetic Materials and Structures Jong Seh Lee, Gérard A. Maugin, Yasuhide Shindo, 1993 *Nonlinear Acoustics - Fundamentals and Applications* B.O. Enflo, C. M. Hedberg, Leif Kari, 2008-06-25 These are the proceedings of the 18th International Symposium on Nonlinear Acoustics ISNA The ISNA series held once every three years is the premier symposium devoted to the field of nonlinear acoustics Nonlinear acoustical phenomena appear when the sound amplitude is sufficiently large Then the sound wave is deformed and shocks and sound of new frequencies are created Earthquake and sonic booms are undesired nonlinear acoustical phenomena nondestructive testing and cancer sound beam therapy are useful nonlinear acoustical applications This book is unique in bringing into relief the common physical foundation of so different phenomena and applications **Proceedings - American Society for Testing and Materials**

American Society for Testing and Materials, 1924 Vols 61 66 include technical papers **Proceedings of the IEEE Workshop on Mathematical Methods in Biomedical Image Analysis**, 1996 **Bulletin** Institute of Mathematics and Its Applications, 1993 The Transmission Or Scattering of Elastic Waves by an Inhomogeneity of Simple Geometry Y. C.

Sheu, 1983 **3rd European Mechanics of Materials Conference on Mechanics and Multi-Physics Processes in Solids** E. Busso, G. Cailletaud, 1999 **Physics of Inhomogeneous Inorganic Materials** Ce-Wen Nan, 1993 *Geometry, continua and microstructure* Gérard A. Maugin, 1999 *Journal of Applied Mechanics*, 1992 *Physics briefs*, 1989

Nucleation and Growth Processes in Materials Antonios Gonis, Patrice E. A. Turchi, Alan J. Ardell, 2000 One of the goals of materials science is to design alloys with pre specified desirable technological properties To achieve this goal it is necessary to have a thorough understanding of the fundamental mechanisms underlying materials behavior In particular one must understand the effects on alloy properties caused by intentional changes in concentration and how the combinations of

temperature time and uncontrollable foreign impurities affect microstructure In addition to the equilibrium phase information contained in phase diagrams nonequilibrium dynamic processes and metastable phases are known to be crucial in determining materials properties This volume brings together researchers working on various aspects of nonequilibrium processes in materials to discuss current research issues and to provide guidelines for future work Particular attention was paid to understanding particle nucleation and growth both experimentally and theoretically solid state reactions nanosystems liquid solid transformations and solidification and amorphization On the theoretical side fundamental principles governing nucleation and growth and related phenomena such as coarsening and Ostwald ripening are discussed Progress is also reported on the phase field method and on Monte Carlo simulations International Aerospace Abstracts ,1995

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