Table of contents

- Subject areas
- Functional Phenomena
- Physics and application of superconductors
- Magnetism and electronic properties and bulk solids
- Physical properties of thin films and artificial multilayers
- Optical and dielectric phenomena
- Biomedical and dental materials
- Surfaces: structure and properties
- · Electrical and thermal transport in normal solids
- Hard and soft magnetic materials, manufacturing and applications
- Lattice properties and thermodynamics
- Metal-gas reactions and electrochemistry
- Magneto-optical and optical recording
- Wood and paper
- Magnetic recording; magnetic fluids
- Natural products and biomimetics
- Fundamental Core Theory
- Fundamentals of materials science
- Amorphous materials
- Carbon
- Nuclear materials and irradiation effects
- Characterization of materials
- Miscellaneous
- Structural Materials
- Metal extraction, melting and refining
- Metal processing
- Structure, transformations and properties, light metals
- Structure, transformations and properties, ferrous metals
- Ceramic processing
- Structure, transformations, properties in ceramics
- Composites: MMC, CMC, PMC
- Applications: aerospace automotive, sports, other
- Applications: building. Modeling: atomic, microscale, large scale
- Materials selection, life cycle costs, environmental tradeoffs, etc
- Corrosion
- Structural Phenomena
- Elasticity-residual stress
- Brittle fracture
- Plastic deformation in static loading
- Microscopic models of plasticity
- Deformation and damage under cyclic load

- Creep, strength and fatigue at elevated temperature
- Mechanical properties of surfaces and in micro-dimensions
- Deformation-related processing
- Mechanical testing and nondestructive inspection
- Polymers and Materials Chemistry
- Crystalline polymers
- Glassy amorphous and liquid crystalline polymers
- Conducting and semiconducting polymers and organics
- Elastomers, networks and gels
- Block copolymers
- Industrial polymerization chemistry
- New synthesis methods for speciality polymers
- Polymer processing
- Inorganic materials chemistry
- Organic/inorganic hybrid materials
- Self-assembling materials chemistry
- Liquid crystals
- Functional Materials
- Physics and chemistry of semiconductors
- Semiconducting devices
- Defects in semiconductors
- Evaluation of semiconductors
- Crystal growth
- Epitaxial growth
- Semiconductor processing and IC fabrication
- Nonlinear optical materials
- Electroceramics
- Packaging