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Recent Developments in the Electron Microscopy of Semiconductors

Preface
Takeda S, Cherns D

Full-length papers

Simultaneous STM and UHV electron microscope observation of silicon nanowires extracted from Si(111) surface
Naitoh Y, Takayanagi K, Oshima Y, Hirayama H

Observation and nucleation control of Ge nanoislands on Si(111) surfaces using scanning reflection electron microscopy
Shibata M, Shklyaev AA, Ichikawa M

Control of island formation on silicon surfaces using ultra-high-vacuum scanning electron microscopy
Homma Y, Finnie P, Ogino T

Atomic resolution Z-contrast imaging of semiconductors
Xin Y, James EM, Browning ND, Pennycook SJ

Quantitative HRTEM analysis of semiconductor quantum dots
Tillmann K, Jäger W

Fluctuation microscopy: a probe of atomic correlations in disordered materials
Voyles PM, Gibson JM, Treacy MMJ

Near-edge conduction band electronic states in SiGe alloys
Batson PE

Plasmon-loss imaging of chains of crystalline-silicon nanospheres and silicon nanowires
Kohno H, Takeda S, Tanaka K

Direct observation of piezoelectric fields in GaN/InGaN/GaN strained quantum wells
Barnard JS, Cherns D

Quantitative TEM of point defects in Si
Eaglesham DJ, Venezia VC, Gossmann H-J, Agarwal A

Advances in SEM-based diffraction studies of defects and strains in semiconductors
Wilkinson AJ

Mechanism for secondary electron dopant contrast in the SEM
Sealy CP, Castell MR, Wilshaw PR

Cover illustration: Computer processed convergent-beam electron diffraction (CBED) pattern of (100) GaAs. The CBED pattern was recorded on an imaging plate and processed by the software 'Spyglass transform' on a Macintosh computer.

Please visit the journal's world wide web site at http://www.jmicro.oupjournals.org

Journal of Electron Microscopy is fully covered in the BECI (Biomedical Engineering Citation Index), ISL, Philadelphia, Pa, USA.
Dislocation propagation in GaN films formed by epitaxial lateral overgrowth
Gradual tilting of crystallographic orientation and configuration of dislocations in GaN selectively grown by vapour phase epitaxy methods
Derivation of growth mechanism of nano-defects in GaN from TEM data
Studies on the structure of crescent-shaped GaAs quantum wires by combination of electron microscopy and photoluminescence spectroscopy
Biological: Full length papers
Translocation of sLe* on the azurophilic granule membrane to the plasma membrane in activated human neutrophils
Reproducibility and applicability of gallium replication as evaluated by biological specimen use
The effect of calcium ionophore A23187 on neurites from embryonic mouse spinal cord explants in culture

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