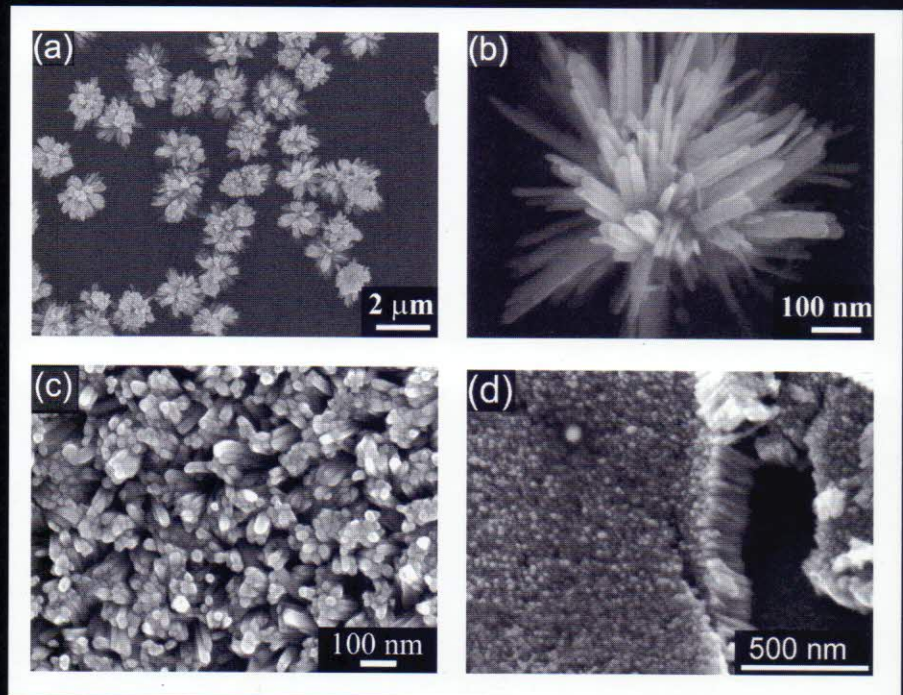


**Applied
Physics**

Volume 38 Number 21 7 November 2005

Topical review: A review and outlook for an anomaly of scanning tunnelling microscopy (STM): superlattices on graphite
W-T Pong and C Durkan

Online: www.iop.org/journals/jphysd



Journal of Physics D: Applied Physics

Volume 38

Number 21

7 November 2005

TOPICAL REVIEW

- R329** A review and outlook for an anomaly of scanning tunnelling microscopy (STM): superlattices on graphite
W-T Pong and C Durkan

PAPERS

APPLIED MAGNETISM AND MAGNETIC MATERIALS

- 3841** Synthesis and magnetotransport properties of nanometric spin valve arrays fabricated by electrodeposition
H-X Wang, Y-C Wu, L-D Zhang, G-H Li, J-X Zhang, M Wang and Z-G Li

PHOTONICS AND SEMICONDUCTOR DEVICE PHYSICS

- 3845** Monte Carlo simulation of the contrast of SEM charge-collection images of dislocations in semiconductors
M Ledra and N Tabet
- 3850** Photonic band gaps of two-dimensional ZnO nanorod photonic crystals
C-S Kee, D-K Ko and J Lee
- 3854** Thermoluminescence and optically stimulated luminescence properties of nanocrystalline Er^{3+} and Yb^{3+} doped $\text{Y}_3\text{Al}_5\text{O}_{12}$ exposed to β -rays
R A Rodríguez, E De la Rosa, P Salas, R Meléndrez and M Barboza-Flores
- 3860** The influence of heating rate on the TL response of glow peaks of beta-irradiated $\text{CaF}_2:\text{Dy}$ (TLD-200)
A N Yazici

EXPERIMENTAL, COMPUTATIONAL AND THEORETICAL PARTICLE BEAM AND PLASMA SCIENCE

- 3865** Investigation of electron emission properties of Ba-activated tungsten cathodes
I Beck, V K Josepovits, J Sneider and Z Toth
- 3870** Tomographic reconstruction of 3D thermal plasma systems: a feasibility study
X Franceries, P Freton, J-J Gonzalez, F Lago and M Masquère
- 3885** Temperature determination of N_2 discharge plasma by computational simulation of its emission spectra
L Mi, P Xu and P-N Wang
- 3889** Dynamics of streamer breakdown of short non-uniform air gaps
G V Naidis
- 3894** Intensity ratio of spectral bands of nitrogen as a measure of electric field strength in plasmas
P Paris, M Aints, F Valk, T Plank, A Haljaste, K V Kozlov and H-E Wagner
- 3900** Laser-induced current in air gap at atmospheric pressure
P Paris, M Aints, M Laan and T Plank

APPLIED SURFACES AND INTERFACES

- 3907** Phenomenological analysis of heterogeneous strain fields in epitaxial thin films using x-ray scattering
A Boulle, R Guinebretière and A Dauger
- 3921** Emission of partial dislocations from triple junctions of grain boundaries in nanocrystalline materials
M Yu Gutkin, I A Ovid'ko and N V Skiba
- 3926** Study on the rapid thermal annealing process of low-energy arsenic and phosphorous ion-implanted silicon by reflective second harmonic generation
K Y Lo
- 3934** Synthesis and photoluminescence of aligned ZnO nanorods by thermal decomposition of zinc acetate at a substrate temperature of $\sim 250^\circ\text{C}$
X Su, Z Zhang, Y Wang and M Zhu

(Continued on inside back cover)