

ISSN 0022-3727

IOP

Journal of Physics D

Applied Physics

Volume 33 Number 8 21 April 2000

Review article: The pseudopotential-density functional method applied to nanostructures

J R Chelikowsky

Online: www.iop.org/Journals/jd

A Journal Recognized by
The European Physical Society



Institute of Physics PUBLISHING

Journal of Physics D: Applied Physics

Volume 33

Number 8

21 April 2000

RAPID COMMUNICATION

- L61 **A note on charge recombination in low density polyethylene under a moderate ac 50 Hz field**
O Fanjeau, D Mary and D Malec

REVIEW ARTICLE

- R33 **The pseudopotential-density functional method applied to nanostructures**
J R Chelikowsky

PAPERS

APPLIED INTERFACES AND SURFACES

- 877 **Dispersion studies of surface-wave-produced discharges with a view to diagnostics**
J Berndt, D Grozev and H Schlüter
- 894 **Structural changes to epitaxial (0001) holmium layers during hydrogen loading**
E J Grier, O Kolosov, A K Petford-Long, R C C Ward, M R Wells and B Hjörvarsson
- 901 **Photoreflectance study in the E_1 and $E_1 + \Delta_1$ transition regions of ZnTe**
A Kaneta and S Adachi
- 906 **A study of ferroelectric thin films deposited on a LaNiO_3 barrier electrode by nebulized spray pyrolysis**
P Murugavel, R Sharma, A R Raju and C N R Rao
- 912 **Raman scattering study on anatase TiO_2 nanocrystals**
W F Zhang, Y L He, M S Zhang, Z Yin and Q Chen

APPLIED MAGNETISM AND MAGNETIC MATERIALS

- 917 **The giant magnetoresistance effect of Fe-Al-O nano-structured granular films**
Shi Hui Ge, Shi Bin Zhang, Jun Hong Chi, Zhen Gang Zhang, Cheng Xian Li and Run Jin Gan
- 921 **Low-field magneto-resistance of spray pyrolysis deposited $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ thin films**
H K Singh, N Khare, P K Siwach and O N Srivastava
- 926 **Effect of Co and W additions on the structure and magnetic properties of $\text{Nd}_2\text{Fe}_{14}\text{B}/\alpha\text{-Fe}$ nanocomposite magnets**
Caiyin You, X K Sun, Wei Liu, Baozhi Cui, Xinguo Zhao and Zhidong Zhang

ELECTROMAGNETISM, OPTICS, ACOUSTICS, HEAT TRANSFER, CLASSICAL MECHANICS AND FLUID DYNAMICS

- 932 **An event-by-event computer simulation of interactions of energetic charged particles and all their secondary electrons in water**
D Emfietzoglou, G Papamichael and M Moscovitch
- 945 **Determination of absorption length of CO_2 and high-power diode laser radiation for ordinary Portland cement**
J Lawrence, E P Johnston and L Li

PHYSICS OF GASES, PLASMAS AND ELECTRIC DISCHARGES

- 948 **A numerical study of neon isotope separation in a dc discharge through a narrow capillary**
H Akatsuka, A N Ezoubtchenko and M Suzuki
- 960 **Simulation of the layer of non-equilibrium ionization in a high-pressure argon plasma with multiply-charged ions**
R M S Almeida, M S Benilov and G V Naidis
- 968 **Spatio-temporal study of the deviations from thermal equilibrium in a high-pressure mercury plasma working under an ac power supply**
K Charrada and G Zissis

(Continued on inside back cover)