

ISSN 0022-3727

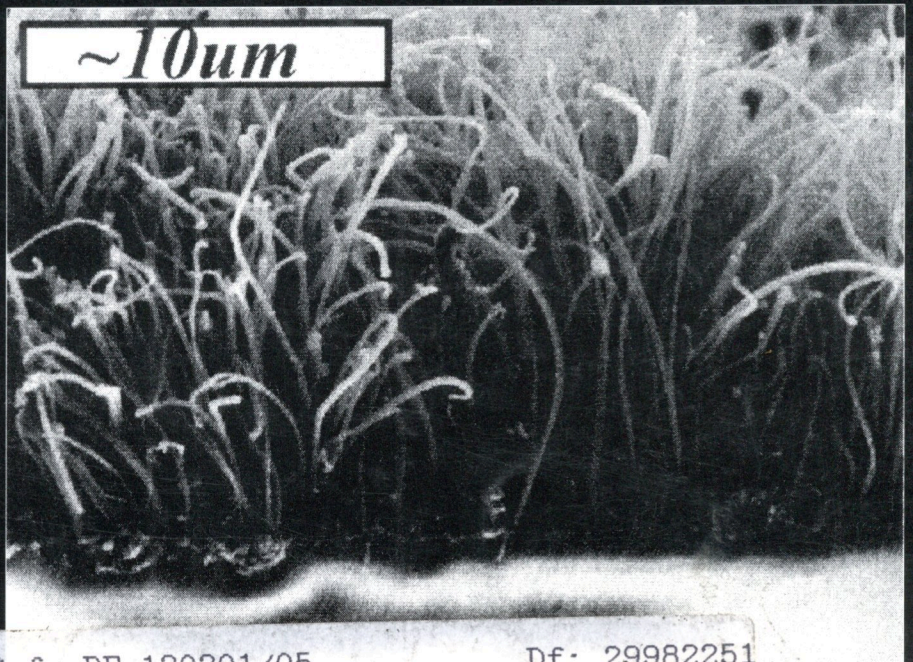
IOP

Journal of Physics D

# Applied Physics

Volume 34 Number 11 7 June 2001

Online: [www.iop.org/Journals/jd](http://www.iop.org/Journals/jd)



Ref: PF 120201/05 Df: 29982251  
JOURNAL OF PHYSICS (D : APPLIED PHYSICS)  
07.06.01 Vol: 34 No. 11  
0022-3727 22101144 02.07.01  
LIBRIS - C2  
144 BOULEVARD KRIM BELKACEM  
ALGER  
ALGERIE

Institute of Physics PUBLISHING

# Journal of Physics D: Applied Physics

Volume 34

Number 11

7 June 2001

## RAPID COMMUNICATIONS

- L49 Loss of radio frequency modulation on optical carrier in high scattering medium: effects of multiple scattering and field of view selection**  
F Pellen, Y Guern, P Olivard, J Cariou and J Lotrian
- L52 Nanosecond breakdown in liquid nitrogen**  
A A Belevtsev and V V Markovets

## PAPERS

### APPLIED INTERFACES AND SURFACES

- 1563 Structural and optical studies of Pr<sup>3+</sup>, Nd<sup>3+</sup>, Er<sup>3+</sup> and Eu<sup>3+</sup> ions in tellurite based oxyfluoride, TeO<sub>2</sub>-LiF, glass**  
V V R K Kumar, A K Bhatnagar and R Jagannathan
- 1569 Ion implantation of MeV Au<sup>+</sup> into potassium titanyl phosphate**  
Ke-Ming Wang, Bo-Rong Shi, Nelson Cue, Fei Lu, Ming-Qi Meng, Hui Hu, Ding-Yu Shen, Yao-Gang Liu, D Fink and M Müller
- 1575 Influence of substrate roughness on the layering of particles in nanocermet thin films**  
S Hazra, A Gibaud and C Sella
- 1579 Subharmonic generation in piezoelectrics with Cantor-like structure**  
C Chiroiu, P P Delsanto, M Scalerandi, V Chiroiu and T Sireteanu
- 1587 Low-temperature growth and characterization of epitaxial La<sub>0.5</sub>Sr<sub>0.5</sub>CoO<sub>3</sub>/Pb(Zr<sub>0.52</sub>Ti<sub>0.48</sub>)O<sub>3</sub>/La<sub>0.5</sub>Sr<sub>0.5</sub>CoO<sub>3</sub> capacitors on SrTiO<sub>3</sub>/TiN buffered Si(001) substrates**  
Wenbin Wu, K H Wong, C L Mak and C L Choy
- 1592 The stabilization of the sensitivity of TLD-100 by combined UV irradiation and thermal annealing**  
A N Yazýcý and Z Öztürk
- 1597 Vacuum gap dependence of field electron emission properties of large area multi-walled carbon nanotube films**  
N S Xu, Y Chen, S Z Deng, J Chen, X C Ma and E G Wang
- 1602 Nonlinear susceptibilities, absorption coefficients and refractive indices of colloidal metals**  
R A Ganeev, A I Rysanyansky, Sh R Kamalov, M K Kodirov and T Usmanov

### APPLIED MAGNETISM AND MAGNETIC MATERIALS

- 1612 The estimation of the signal-to-noise ratio of a nanoparticle**  
P C Fannin and Y L Raikher
- 1617 Structure in magneto-rheological fluids: a theoretical analysis**  
B R Jennings, M Xu and P J Ridler

### EXPERIMENTAL, COMPUTATIONAL AND THEORETICAL PARTICLE BEAM AND PLASMA SCIENCE

- 1624 Rate coefficients of ion-molecule processes in gases under varying electric field and ion density conditions**  
N L Aleksandrov and A M Okhrimovskyy
- 1632 Excitation of dielectric barrier discharges by unipolar submicrosecond square pulses**  
S Liu and M Neiger
- 1639 Target temperature simulation during fast-pulsing plasma immersion ion implantation**  
X Tian and P K Chu
- 1646 Spectroscopic investigation of charge-transfer pumping of lithium-like O<sup>5+</sup> ion**  
I F Shaikhislamov

*(Continued on inside back cover)*