ISSN 0022-3727

IoP

Journal of Physics D Applied Physics Physics

Volume 36 Number 15 7 August 2003

Review article: The physics of soft x-ray lasers pumped by electron collisions in laser plasmas *G J Tallents*

Online: www.iop.org/journals/jphysd



Institute of Physics PUBLISHING

APPLIED SURFACES AND INTERFACES

- 1842 Phase-stepping optical profilometry of atom mirrors
 D A MacLaren, H T Goldrein, B Holst and W Allison
- 1850 Methods for the determination of the optical constants of thin films from single transmission measurements: a critical review

 D Poelman and P F Smet
- Near-surface composition and tribological behaviour of plasma nitrided titanium M P Kapczinski, E J Kinast and C A dos Santos

STRUCTURE AND PROPERTIES OF MATTER

- Three-dimensional impedance networks for modelling frequency dependent electrical properties of composite materials

 E Mårtensson and U Gäfvert
- 1873 Effects of neutral particle dynamics in the active medium of discharge pumped XeCl lasers O Lamrous, A Mezeghrane, M D Mitiche and M Tamine
- 1881 Simulation of microstructural evolution during isostatic compaction of monosized spheres L Liu

INTERDISCIPLINARY PHYSICS AND RELATED AREAS OF SCIENCE AND TECHNOLOGY

- 1890 Diffusion band gaps of thermal neutron diffusion in two-dimensional structures with periodic moderators H Takeda and K Yoshino
- 1896 A new technique of beam energy resolution by using only quadrupole magnets P R Sarma
- 1903 A peak-search method based on spectrum convolution
 A Likar and T Vidmar
- 1910 Elastomer rubbers as deflection elements in pressure sensors: investigation of properties using a custom designed programmable elastomer test rig
 S O'Sullivan, R Nagle, J A McEwen and V Casey
- 1917 The self-combustion of structurally co-deformed powder mixtures: a direct view of the process M Monagheddu, S Doppiu, C Deidda and G Cocco

Journal of Physics D: Applied Physics

	volume 36 Number 15 / August 2003
	TOPICAL REVIEW
R259	The physics of soft x-ray lasers pumped by electron collisions in laser plasmas G J Tallents
	PAPERS
	APPLIED MAGNETISM, MAGNETIC MATERIALS AND SUPERCONDUCTIVITY
1759	Formation, structure and magnetic properties of $Nd_3Fe_{26.8-x}Co_xV_{2.2}$ compounds B D Liu, J L Wang, J L Yao, W X Li, Z H Liu, G H Wu and F M Yang
1764	A study of magneto-optical effect in dilute Fe ₃ O ₄ ferrofluid by attenuated total reflection, ferromagnetic resonance and Faraday rotation C P Pang, C T Hsieh and J T Lue
1769	Large coercivity in nanocrystalline TbMn ₆ Sn ₆ permanent magnets prepared by mechanical milling H-w Zhang, T-y Zhao, J Zhang, C-b Rong, S-y Zhang, B-g Shen, L Li and L-g Zhang
	PHOTONICS AND SEMICONDUCTOR DEVICE PHYSICS
1773	Temperature coefficient of elastic constants of SiO ₂ over-layer on LiNbO ₃ for a temperature stable SAW device M Tomar, V Gupta and K Sreenivas
1778	Electro-optic properties of potassium hydrogen phthalate crystal and its application as modulators N Kejalakshmy and K Srinivasan
1783	Luminescence enhancement of Er ³⁺ ions and energy transfer in PbWO ₄ single crystals Y Huang and Xi Feng
1789	A diaminomaleonitrile derivative as a new dopant for red-light-emitting electroluminescent device X Wang, Y Sakuratani, H Sone, K Tanaka, S Miyata and H Usui
1794	Intersubband absorption in annealed InAs/GaAs quantum dots: a case for polarization-sensitive infrared detection S Chakrabarti, P Bhattacharya, A D Stiff-Roberts, Y Y Lin, J Singh, Y Lei and N Browning
	EXPERIMENTAL, COMPUTATIONAL AND THEORETICAL PARTICLE BEAM AND PLASMA SCIENCE
1798	Transport properties in non-equilibrium argon, copper and argon–copper thermal plasmas A Aubreton and M-F Elchinger
1806	The plasma-sheath and its stability in a quiescent plasma containing two species of positive ion R N Franklin
1810	Analytical model of a dual frequency capacitive sheath J Robiche, P C Boyle, M M Turner and A R Ellingboe
1817	Interaction of high temperature deuterium plasma streams and fast ion beams with stainless steels in dens plasma focus device
	V A Gribkov, V N Pimenov, L I Ivanov, E V Dyomina, S A Maslyaev, R Miklaszewski, M Scholz, U E Ugaste, A V Dubrovsky, V C Kulikauskas and V V Zatekin

One-dimensional modelling of a capacitively coupled rf plasma in silane/helium, including small

(Continued on inside back cover)

1826

concentrations of O2 and N2