## FORTHCOMING PAPERS

## Investigation of Enhanced HgBr $(B^2\Sigma^+X^2\Sigma^+)$ Laser Emission Due to Collisions of Xe<sup>+</sup> Ions and HgBr<sub>2</sub>

M. F. Mahmood (USA)

## Temperature Dependence of the Lifetime of $Cr^{3+}$ Luminescence in Garnet Crystals

M. Yamaga (Japan), B. Henderson, K. P. O'Donnell, C. Trager Cowan, A. Marshall (UK)

#### Collisional Broadening of Ba I Line (553.5 nm) by He or Ar

E. Kuchta, R. J. Alvarez II, Y. H. Li, D. A. Krueger, C. Y. She (USA)

## Anisotropic Scattering Generated by Photorefractive Four-wave Mixing in BaTiO<sub>3</sub> Crystal

Y. S. Qiu, T. S. Lu, L. X. Xu, S. C. Xu (P. R. China)

# Absorption of Subpicosecond Ultraviolet Laser Pulses in High-Density Plasma

R. Fedosejevs, R. Ottmann, R. Sigel, G. Kühnle, S. Szatmári, F. P. Schäfer (F. R. Germany)

## Applied Physics A 50, No. 1 (1990)

### Editorial 1

Solids and Materials

### L. Tapfer, P. Grambow

X-Ray Bragg Diffraction on Periodic Surface Gratings 3
P. Grosse, B. Harbecke, B. Heinz, W. Jantz, M. Maier Characterization of Conducting GaAs Multilayers by Infrared Spectroscopy at Oblique Incidence 7
T. Sato, K. Haneda, M. Seki, T. Ijjima

Morphology and Magnetic Properties of Ultrafine ZnFe<sub>2</sub>O<sub>4</sub> Particles 13 M. Lo Savio, M. E. Oliveri

A Novel Preparation Method and Investigation of Sprayed CdS Films 17 M. A. Ochando, J. Llopis

Effect of Oxidizing Anneals on Thermochemically Reduced MgO:Ni Crystals 23

## L. Nánai, I. Hevesi, N. F. Bunkin, B. A. Zon, S. V. Lavrishev,

B. S. Luk'yanchuk, G. A. Shafeev Influence of Electric Field on Heterogeneous Reactions Stimulated by Laser Light, I. Theory 27

### M. Omini, A. Sparavigna, A. Strigazzi

Thermal Diffusivity and Biot Number: A New Experimental Method 35 Y. Ito, M. Hirose, Y. Tabata

Positron Annihilation in Synthetic Zeolites (II) Magnetic Quenching Effect 39

## G. Consolati, F. Quasso

On the Origin of the Intermediate Component in the Positron Lifetime Spectra in Polymers 43

#### M. Donath, G. Schönhense, K. Ertl, V. Dose

Influence of Surface Roughness and Chemisorption on Magnetic Hysteresis Curves of a Ni(110) Surface Observed by Spin-Resolved Inverse Photoemission 49

Surfaces, Interfaces, and Layer Structures

## J. Wollschläger, J. Falta, M. Henzler

Electron Diffraction at Stepped Homogenous and Inhomogeneous Surfaces 57

## H. Flaisher

Anomalous Photoacoustic Behavior of Semiconductors: Evidence for Thermally Generated Surface Deformations 69

## K.-Y. Ahn, R. Stengl, T. Y. Tan, U. Gösele, P. Smith

Growth, Shrinkage, and Stability of Interfacial Oxide Layers Between Directly Bonded Silicon Wafers **85** 

## T. Biernat, Ch. Kleint

Coverage Dependence of Field Emission Flicker Noise Due to Lithium Adsorbed on the W(112) Surface 95

## L. Nánai, I. Hevest, N. F. Bunkin, B. A. Zon, S. V. Lavrishev,

B. S. Luk'yanchuk, G. A. Shafeev

Influence of Electric Field on Heterogeneous Reactions Stimulated by Laser Light. Part II: Experimental 101

### Yang Liu, Yao Hongnian

The Determination of Dislocation Density Depth Profiles in Surface Layers from Broadening of X-Ray Diffraction Profiles 107

## B. A. Brusilovsky

Kinetic Ion-Induced Electron Emission from the Surface of Random Solids 111

## COPYRIGHT TRANSFER AGREEMENT

Copyright to the article entitled ".....

by..... is hereby transferred to Springer-Verlag (for US Government: to the extent transferable), effective if and when the article is accepted for publication in APPLIED PHYSICS.

However, the authors reserve the following:

1. All proprietary rights other than copyright, such as patent rights.

2. The right to grant or refuse permission to third parties to republish all or part of the article or translation thereof.

In the case of whole articles, such third parties must obtain Springer-Verlag's permission as well. However, Springer-Verlag may grant rights with respect to journal issues as a whole.

3. The right to use all or part of this article in future works of their own, such as lectures, press releases, reviews, textbooks, or reprint books.

To be signed by at least one of the authors (who agrees to inform the others, if any) or, in the case of a "work made for hire" by the employer.

(Signature)

(Print Name)

.....

(Date)

(Corporate Title, if not Author)

.....

This **Transfer Agreement** results from the US Copyright Act of 1976, effective 1 January 1978. Prospective authors may photocopy the form and send it in with a paper. According to the wording of this form, the agreement becomes legally binding only if the paper is accepted and on the date of acceptance; otherwise acceptance is conditional and further processing for publication will be delayed until Springer-Verlag receives the properly executed form.

"Works for hire" are articles produced as part of employment, most often in an industrial laboratory. In these cases, the employer holds the copyright and an authorized corporation representative must sign the transfer form. Some authors are government employees and their articles may not be eligible for copyright, depending on whether or not the preparation of the article is an offical requirement of employment. Springer-Verlag's copyright transfer form attempts to bypass potentially complicated legal issues by merely asking these government employees to transfer copyright "to the extent transferable".

The majority of physics articles have more than one author and, as a rule, each co-authors's contribution is considered an inseparable part of the whole. Only one author need sign the transfer for an article. The terms "work for hire" and a "work of the US government" apply only if all the authors have written an article under the same conditions. For example: if one author not employed by the government contributes to an article that is signed by four others who are government employed, the article is not considered a "work of the US government".

Note that the signed statement given above must be received by Springer-Verlag before the manuscript can be accepted for publication.