

# Recent Papers by IBM Authors

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• Papers are listed alphabetically by name of journal.

## A

**Strain-Relaxation in Thin Films on Substrates**, A. Gangulee (RES Yorktown Hts., NY), *Acta Metallurgica* 22, No. 2, 177-183 (February 1974).

**One Researcher's Personal Account**, R. L. Garwin (RES Yorktown Hts., NY), *Adventures in Experimental Physics* 3, 124-130 (1974).

**Laser-Induced Phase Transition in the Surface of SmS Crystals**, D. W. Pohl, R. Badertscher, K. A. Müller (RES Zurich, Switzerland) and P. Wachter (Laboratorium für Festkörperphysik, ETH Zurich), *Applied Optics* 13, No. 1, 95-97 (January 1974).

**Stacked Optical Memories**, D. W. Pohl (RES Zurich, Switzerland), *Applied Optics* 13, No. 2, 341-346 (February 1974).

**Propagation of X-Rays in Waveguides**, E. Spiller and A. Segmüller (RES Yorktown Hts., NY), *Applied Physics Letters* 24, No. 2, 60-61 (January 15, 1974).

**Effects of Ion Radiation Damage on the Magnetic Domain Structure of Amorphous Gd-Co Alloys**, R. J. Gambino, J. Ziegler and J. J. Cuomo (RES Yorktown Hts., NY), *Applied Physics Letters* 24, No. 2, 99-101 (January 15, 1974).

**Circular Stacking Faults in Silicon**, W. K. Tice (SPD Burlington, VT) and T. C. Huang (RES San Jose, CA), *Applied Physics Letters* 24, No. 4, 157-158 (February 15, 1974).

**Mode Conversion in Magneto-Optic Waveguides Subjected to a Periodic Permalloy**, S. C.-C. Tseng, A. R. Reisinger, E. A. Giess and C. G. Powell (RES Yorktown Hts., NY), *Applied Physics Letters* 24, No. 6, 265-267 (March 15, 1974).

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## B

**Intensity Fluctuation Spectroscopy of Laser Light Scattered by Solutions of Spherical Viruses: R17, QB, BSV, PM2 and T7. I. Light Scattering Technique**, P. N. Pusey (Royal Radar Establishment, Gt. Malvern, Worcester, England), D. E. Koppel (Cornell Univ., Ithaca, NY), D. W. Schaefer (Sandia Laboratories, Albuquerque, NM), R. D. Camerini-Otero (New York Univ., School of Medicine, NY) and S. H. Koenig (RES Yorktown Hts., NY), *Biochemistry* 13, No. 5, 952-960 (February 26, 1974).

**Self-Orthogonal Latin Squares of All Orders  $n \neq 2, 3, 6$** , R. K. Brayton, D. Coppersmith (Harvard Univ., Cambridge, MA) and A. J. Hoffman (RES Yorktown Hts., NY), *Bulletin of the American Mathematical Society* 80, No. 1, 116-118 (January 1974).

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**Carbazole and Trinitrofluorene: An Ab Initio Investigation of Ionization Potentials, Electron Affinities and Excited States**, P. S. Bagus, I. P. Batra and E. Clementi (RES San Jose, CA), *Chemical Physics Letters* 23, No. 3, 305-310 (December 1, 1973).

**Anharmonicity in Rotational and Vibrational Excitation of  $H_2$  by  $Li^+$  Collisions**, J. Schaefer, W. A. Lester, Jr. (RES San Jose, CA), D. Kouri and C. A. Wells (Univ. of Houston, TX), *Chemical Physics Letters* 24, No. 2, 185-190 (January 15, 1974).

**A New  $H_3$  Potential Energy Surface and Its Implications for Chemical Reaction**, A. C. Yates (Indiana Univ., Bloomington) and W. A. Lester, Jr. (RES San Jose, CA), *Chemical Physics Letters* 24, No. 3, 305-309 (February 1, 1974).

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**Performance Analysis for the Skylab Terminal System**, R. J. Mancini (DPD Raleigh, NC), *IBM Systems Journal* 13, No. 2, 94-114 (1974).

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**Synchronous Data Link Control: A Perspective**, R. A. Donnan and J. R. Kersey (SDD Research Triangle Park, NC), *IBM Systems Journal* 13, No. 2, 140-162 (1974).

**A Model for the Evaluation of Storage Hierarchies**, J. Gecsei (Univ. of Montreal, Canada) and J. A. Lukes (SDD San Jose, CA), *IBM Systems Journal* 13, No. 2, 163-178 (1974).

**Chiffriermethoden und Datenschutz (Cryptography and Computer Privacy)** H. Feistel (RES Yorktown Hts., NY), *IBM Nachrichten* 24, No. 219, 21-26 (February 1974).

**Generation of the Rotationally Symmetric  $Te_{01}$  and  $Tm_{01}$  Modes from a Wavelength Tunable Laser**, J. J. Wynne (RES Yorktown Hts., NY), *IEEE Journal of Quantum Electronics* QE-10, No. 2, 125-127 (February 1974).

Scanning Limitations of Liquid-Crystal Displays, P. M. Alt and P. Pleshko (RES Yorktown Hts., NY), *IEEE Transactions on Electron Devices* ED-21, No. 2, 146-155 (February 1974).

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A Theory of System Complexity, A. E. Ferdinand (SDD Kingston, NY), *International Journal of General Systems* 1, 19-33 (1974).

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Rotation Effects on the Isothermal Growth of  $(\text{Eu}, \text{Y})_3(\text{Fe}, \text{Ga})_5\text{O}_{12}$  Magnetic Bubble Films by Liquid Phase Epitaxy, E. A. Giess, D. C. Cronemeyer, R. Ghez, E. Klokholm and J. D. Kuptsis (RES Yorktown Hts., NY), *Journal of the American Ceramic Society* 56, No. 11, 593-595 (November 1973).

Optical Anisotropy Effects in Magneto-Optic Memory Materials, J. T. Jacobs and D. Treves (RES San Jose, CA), *Journal of Applied Physics* 44, No. 12, 5546-5552 (December 1973).

Eddy-Current Compensating Deflection Yokes, G. A. Wardly (RES Yorktown Hts., NY), *Journal of Applied Physics* 44, No. 12, 5607-5612 (December 1973).

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Low-Energy Cathodoluminescence of ZnO: The ZnO-Plasma Display, W. B. Pennebaker and J. F. O'Hanlon (RES Zurich, Switzerland), *Journal of Applied Physics* 45, No. 3, 1315-1322 (March 1974).

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Physical Cluster Free Energy from Liquid-State Perturbation Theory, F. F. Abraham, J. K. Lee and J. A. Barker (RES San Jose, CA), *Journal of Chemical Physics* 60, No. 1, 246-247 (January 1, 1974).

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Field Effect Modulated Photoluminescence in ZnO, T. O. Sedgwick (RES Yorktown Hts., NY), *Journal of the Electrochemical Society* 121, No. 3, 452-454 (March 1974).

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## P

**The Measurement of Deep Levels Using C-V Techniques**, L. M. Lambert (Univ. of Vermont, Burlington) and H. J. Kump (SPD, Burlington, VT), *Physica Status Solidi (a)* 21, No. 1, 235-245 (January 16, 1974).

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**Configuration-Interaction Study of Atoms. I. Correlation Energies of B, C, N, O, F, and Ne**, F. Sasaki and M. Yoshimine (RES San Jose, CA), *Physical Review A* 9, No. 1, 17-25 (January 1974).

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**Modification of the Absorption Edge of GaAs Arising from Hot-Electron Effects**, J. C. McGroddy and O. Christensen (RES Yorktown Hts., NY), *Physical Review B* 8, No. 12, 5592-5596 (December 15, 1973).

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**Localized and Bandlike Valence-Electron States in FeS<sub>2</sub> and Other NiS<sub>2</sub>,** E. K. Li, K. H. Johnson (Massachusetts Institute of Technology, Cambridge), D. E. Eastman and J. L. Freeouf (RES Yorktown Hts., NY), *Physical Review Letters* 32, No. 9, 470-472 (March 4, 1974).

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## S

**A Computer Simulation of Linear Gel Permeation Chromatography,** A. C. Ouano and J. A. Barker (RES San Jose, CA), *Separation Science* 8, No. 6, 673-699 (1973).

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## T

**Synthesis of (4.3.3) Propellanes by the Photochemical Addition of Tetralin to Olefins,** C. S. Angadiyavar, J. Cornelisse, V. Y. Merritt and R. Srinivasan (RES Yorktown Hts., NY), *Tetrahedron Letters* No. 44, 4407-4408 (October 1973).

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**The Constrained Coefficient Problem for Typically Real Functions,** G. B. Leeman, Jr. (RES Yorktown Hts., NY), *Transactions of the American Mathematical Society* 186, No. 459 177-189 (December 1973).

### • Book abstract

**On Raising: One Rule of English Grammar and Its Theoretical Implications,** P. M. Postal (RES Yorktown Heights, NY), The M.I.T. Press, Massachusetts Institute of Technology, Cambridge, MA, 1974.

*On Raising* is devoted chiefly to supporting the claim that English does contain a rule of Raising—a rule that has the function of taking the complement subject noun phrase in certain complement constructions and reassigning it as a constituent of the main clause. The author presents several supporting arguments that Raising produces derived objects and he considers various theoretical and descriptive consequences of, and questions raised by, the existence of Raising.