## Contents of previous issues in Volume 15

January 1971	Vol. 15, No. 1
• Papers on Chemical Topics:  Preface	Polymorphism in Cholesteryl Esters: Cholesteryl Palmitate by M. J. Vogel, E. M. Barrall II and C. P. Mignosa 52
Digital Simulation of the Global Transport of Carbon Monoxide by H C. W. Kwok, W. E. Langlois and R. A. Ellefsen.	On Measuring Nuclear Magnetic Shielding Anisotropies in Liquid Crystal Solvents by C. S. Yannoni
A New Technique for Gas-phase Kinetic Spectroscopy of Molecules in the Triplet State by H. E. Hunziker	
Photoconduction in Aromatic Hydrocarbons by G. Castro	7 • Papers:
Cyclobutene by R. Srinivasan	Application of Probabilistic Decoding to Digital Magnetic Recording Systems by H. Kobayashi
Preparation and Thermodynamics of Some Homologous Nitrones, a New Group of Liquid Crystals by W. R. Young, I. Haller and A. Aviram	A New High-sensitivity Organic Photoconductor for Electrophotography  by R. M. Schaffert

March 1971	Vol. 15, No. 2
Preface	Molecular Engineering in the Development of Materials for Thermoplastic Recording by H. R. Anderson, Jr., E. A. Bartkus and J. A. Reynolds
by R. G. Bayer and J. L. Sirico	• Communication:
Effect of Hammer Length and Nonlinear Paper-ribbon Characteristics on Impact Printing by A. J. Jones and A. J. Lavin	On the Correlation between Domain Size and Coercive Force in Grain-oriented 3.25% Si-Fe by J. A. Pesch
Adhesion and Partial Slip between Normally Loaded Rounded Surfaces	•
by P. A. Engel and H. D. Conway	• Papers:
Analysis of Defect Distribution in Fransistor Structures with Reflection and Fransmission X-Ray Topography by J. K. Howard and P. J. Smith	Segmentation Methods for Recognition of Machine-printed Characters by R. L. Hoffman and J. W. McCullough
Effect of Extremely Thin Nitrogenous Surface Films on Phosphorus-impurity Profiles in Silicon by J. Makris, A. Ferris-Prabhu and M. L. Joshi 132	System Validation by Three-level Modeling Synthesis by K. A. Duke, H. D. Schnurmann and T. I. Wilson

May 1971	Vol. 15, No. 3

• Papers:	
Numerical Method for Computing	Interaction Potential between Li+ and HD:
Nonlinear, Time Dependent,	Region for Rotational Excitation Cross Sections
Buoyant Circulation of Air in Rooms	by W. A. Lester, Jr
by J. E. Fromm	
•	A Design Study of Ultrasonic Bonding Tips
Random-walk Model of Stream Network Development	by S. Z. Dushkes
by J. S. Smart and V. L. Moruzzi	
Automatic Pulse Parameter Determination with the Computer	• Communications:
Augmented Oscilloscope System	Heat-transfer Calculations at the Tape-head
by A. A. Guido, L. Fulkerson and P. E. Stuckert 204	Interface of a Computer Tape Drive
by A. A. Guldo, L. Pulkerson and I. E. Stuckert204	by G. M. Lederle236
A Quasi-steady-state Analysis for the	•
Electrophotographic Discharge Process	The Common-core Filter as an
by H. Seki, I. P. Batra, W. D. Gill	Electromagnetic Interference-suppression Device
K. K. Kanazawa and B. H. Schechtman213	by D. R. Bush242

## • Papers:

Experimental Fabrication of One-dimensional GaAs Laser Arrays by J. C. Marinace	Automation of a Residual Gas Analyzer on a Time-shared Computer by D. L. Raimondi, H. F. Winters, P. M. Grant and D. C. Clarke
Fabrication and Properties of Monolithic Laser Diode Arrays by G. J. Sprokel	
Characteristics of GaAs Laser Arrays Designed for Beam Addressable Memories  by H. Wieder and H. Werlich	• Communications:  Equivalent Circuit for Conductivity-Temperature Characteristics of the PdO/Ag-Pd Glaze Resistor by G. J. Kahan
Interleaving Slow- and Rapid-data-rate Experiments with a Time-sharing Laboratory Automation System by P. M. Grant	An Improved Method for Designing Optimal Linear Compensators by S. G. Greenberg and Y. Bard
Automation of Data Acquisition in Transient Photoconductive Decay Experiments by B. H. Schechtman and P. M. Grant	Some Numerical Results for Iterative Continuation in Nonlinear Boundary-value Problems by W. E. Bosarge, Jr., and C. L. Smith

## Contents of previous issue

mdy 1905	VOI. 9, INO. 3
• Articles:	Short Communications:
Fresnel Holograms: Their Imaging Properties and Aberrations	Chain Matrices and the Crank-Nicolson Equation by H. P. Flatt196
by J. A. Armstrong	A Drive Scheme for the GaAs-Si Light-Activated Switch by P. Polgar, M. M. Roy and T. H. Yeh200
Some Numerical Experiments in the Theory of Polynomial Interpolation by F. W. Luttmann and T. J. Rivlin	Mapping an Arbitrary Range Into (-1, 1) with a Side Condition: Application to Numerical Quadratures by A. D. McLean and M. Yoshimine203
• Letter to the Editor:	A New Technique for Dynamic Analysis of
On a Circular Crack in a Transversely Isotropic Elastic Material Under Prescribed Shear Stress by W. T. Chen and R. P. Soni	Acoustical Noise by R. H. Peterson and R. L. Hoffman205



The IBM Journal of Research and Development is regularly indexed and abstracted by Science Abstracts (I.E.E.-Britain), Chemical Abstracts, The Engineering Index, Physikalische Berichte, ASM Review of Metal Literature, Mathematical Reviews, Computing Reviews, Computer Abstracts (Technical Information Co. Ltd.-Britain), Bulletin Signaletique (C.N.R.S.-France), Solid State Abstracts, Instrument Abstracts (British Scientific Instrument Research Association), Psychological Abstracts, Computer Abstracts on Cards, Automatic Subject Citation Alert, American Documentation Institute. Reproductions of the magazine by years are available on positive microfilm from University Microfilms, 313 N. First Street, Ann Arbor, Michigan.