

Papers by Bell Laboratories Authors

BIOLOGY

Acoustical Properties of the Vocal Tract. M. M. Sondhi, Physics (November 1978), pp. 1-2.

Acoustic Characterization and Computer Simulation of the Air Volume Displaced by the Vibrating Vocal Cords: Lateral and Longitudinal Motion. J. L. Flanagan and K. Ishizaka, Proceedings of the International Symposium on Articulatory Modeling (July 1977), pp. 251-261.

A ^{13}C NMR Study of Gluconeogenesis in Isolated Rat Liver Cells. S. M. Cohen, S. Ogawa, and R. G. Shulman, Frontiers of Biological Energetics, Vol. 2, New York: Academic Press, 1978, pp. 1357-1364.

Early Experience with Sour and Bitter Solutions Increases Subsequent Ingestion. R. M. London, C. T. Snowdon, and J. M. Smithana, Physiology and Behavior (June 1979).

The Solution Conformation of Malformin A. A. E. Tonelli, Biopolymers, 17 (1978), pp. 1175-1179.

CHEMISTRY

Block Copolymer Theory 5. Spherical Domains. E. Helfand and Z. R. Wasserman, Macromolecules, 11 (September-October 1978), pp. 960-966.

^{13}C Chemical Shifts of the Polypropylene "Model" Compounds 3,5-Dimethylheptane and 3,5,7-Trimethylnone. A. E. Tonelli, Macromolecules, 12 (1979), pp. 83-85.

Calculated and Measured ^{13}C NMR Chemical Shifts of the 2,4,6-Trichloroheptanes and Their Implications for the ^{13}NMR Spectra of Poly(vinyl chloride). A. E. Tonelli, F. C. Schilling, W.H. Starnes, Jr., L. Shepherd, and I. M. Plitz, Macromolecules, 12 (1979), pp. 78-83.

CuCl: More Facts Generate More Thoughts on High Temperature Superconductivity. J. A. Wilson, Phil. Mag. B., 38 (1978), pp. 427-444.

The High Temperature Deposition and Evaluation of Phosphorus-or Boron-Doped Silicon Dioxide Films. A. C. Adams, C. D. Capio, S. E. Haszko, G. I. Parisi, E. I. Povilonis, and M. D. Robinson, J. Electrochem. Soc., 126 (February 1979), pp. 313-319.

Measuring the Phosphorus Concentration in Deposited Phosphosilicate Films. A. C. Adams and S. P. Murarka, J. Electrochem. Soc., 126 (February 1979), pp. 334-338.

The Nuclear Modulation Effect in Electron Spin Echoes for Complexes of Cu^{2+} and Imidazole with ^{14}N and ^{15}N . W. B. Mims and J. Peisach, J. Chem. Phys., 69, No. 11 (December 1, 1978), pp. 4921-4930.

Parametric Counting of Samples Generating Complex X-Ray Spectra. P. F. Schmidt, J. E. Riley, Jr., and D. J. McMillan, Anal. Chem., 51 (February 1979), pp. 189-194.

Piezooptic and Electrooptic Constants of Crystals. D. F. Nelson, Landolt-Bornstein, New Series, Berlin: Springer-Verlag, 1979, pp. 495-505.

Preparation and Characterization of Tetra (2,4-Pentanedionato)-Hexa(Benzotriazolato)-Penta-Cu (II). J. H. Marshall, Inorg. Chem., 17 (December 1978), pp. 3711-3713.

X-Ray Absorption Studies of Metalloproteins. R. G. Shulman, Trends in Biochemical Sciences, 3, No. 12 (December 1978), pp. N282-N283.

COMPUTING

Application of Multilinear Algebra in Optimal Regulation of Nonlinear Polynomial Systems. M. R. Buric, Proceedings of 16th Annual Allerton Conference on Communications, Control and Computing, 1 (October 4, 1978), pp. 655-663.

Development of the Law of Computer Software Protection. R. O. Nimitz, Journal of Patent Officer Society, 61 (January 1979), pp. 3-43.

IMSMON-A Low Overhead Monitor for IMS Systems. B. Domanski, 1978 Compact Measure Group 1X Conference Proceedings on the Management and Evaluation of Computer Performance (December 5, 1978), pp. 115-123.

Model for the User Services Layer of a Network Architecture. K. Coates, 1969 ACM Computer Science Conference (February 20, 1979), p. 38.

On-Line PWB Design Verification and Associated Data Structuring Problems. J. C. Foster and S. Pardee, Proceedings, International Conference, Interactive Techniques in Computer Aided Design, Bologna, Italy, 78 CH1289-8C (September 21-23, 1978), pp. 265-271.

What Employers Look for When Hiring Computer Science Graduates. M. M. Irvine, Proceedings of 1978 Annual Conference Association for Computing Machinery, 1, pp. 404-405.

ELECTRICAL AND ELECTRONIC ENGINEERING

Alpha Particles Tracks in Silicon and Their Effect on Dynamic MOS RAM Reliability. D. S. Yaney, J. T. Nelson, and L. L. Vaniskike, IEEE Trans. Electron Dev., ED-26 (January 1979), pp. 10-16.

Defect Etch for (100) Silicon Evaluation. D. G. Schimmel, J. Electrochem. Soc., 126 (March 1979), pp. 479-483.

Design of an Integrated Circuit for the TIC Low-Power Line Repeater. P. C. Davis, J. F. Graczyk, and W. A. Griffin, IEEE J. of Solid State Circuits, SC-14 (February 1979), pp. 109-120.

Digital Communications—The Silent (R) Evolution? M. R. Aaron, IEEE Communications Magazine, 17, No. 1 (January 1979), pp. 16-26.

The Evolution of the Discrete Crystal Single-Sideband Selection Filter in the Bell System. T. H. Simmonds, Jr., Proc. IEEE, 67, No. 1 (January 1979), pp. 109-115.

Fatigue Behavior of Flex Cables and Circuits. W. Engelmaier, Electronic Packaging and Production, 19 (February 1979), pp. 110-118.

A 50 MHz Phase and Frequency Locked Loop. R. R. Cordell, C. N. Dunn, J. B. Forney, and W. G. Garrett, 1979 ISSCC Digest of Technical Papers 22 (February 14, 1979), pp. 234-235.

Final State Structure in XPS. G. K. Wertheim, Electron Spectroscopy, Theory, Techniques and Application, Vol. 2, New York: Academic Press, 1978, pp. 259-284.

Foreword-Special Issue on Quantum-Electronic Devices for Optical Fiber Communications. T. Li, IEEE J. of Quantum Electronics, QE-14 (November 1978), p. 790.

InGaAsP/InP Photodiodes: Microplasma-Limited Avalanche Multiplication at 1-1.3 m Wavelength. T. P. Lee, C. A. Burrus, A. G. Dentai, IEEE J. Quantum Electronics, QE-15 (January 1979), pp. 30-35.

An Integrated PCM Encoder Using Interpolation PCM Decoder. B. A. Wooley, D. C. Fowlis, J. L. Henry, and C. E. Williams, IEEE J. Solid State Circuits, SC-14, No. 1 (February 1979), pp. 20-25.

P-N-P-N Optical Detectors and Light-Emitting Diodes. J. A. Copeland, A. G. Dentai, and T. P. Lee, IEEE J. Quantum Electronics, QE-14 (November 1978), pp. 810-813.

Self-Contained LED-Pumped Single-Crystal. J. Stone and C. A. Burrus, Fiber and Integrated Optics, 2 (1979), pp. 19-46.

Semiconductor-Laser Self-Pulsing Due to Deep-Level Traps. J. A. Copeland, Electron. Lett. (December 7, 1978), pp. 809-810.

Signal-To-Noise Ratio Statistics for Nondispersive Fading in Radio Channels with Cross Polarization Interference Cancellation. N. Amitay, IEEE Transactions on Communication, COM-27, No. 2 (February 1979), pp. 498-502.

Slow Positron Emission from Metal Surfaces. A. P. Mills, P. M. Platzman, and B. L. Brown, Phys. Rev. Lett., 41 (1978), p. 1076.

A Stereo-Fiberscope with a Magnetic Interlens Bridge for Laryngeal Observation. O. Fujimura, T. Baer, S. Niimi, J. Acoust. Soc. Amer., 65, No. 2 (1979), pp. 478-480.

Supplement to Literature on Digital Signal Processing. J. F. Kaiser and H. D. Helms, Special Publication of IEEE ASSP Society, IEEE, New York, JH4686-2 ASSP (1979), p. 237.

MATERIALS SCIENCE

An AES Study of the Surface Composition of Ion-Etched Iron-Chromium Alloys: Effect of Absorbed CO. R. P. Frankenthal and D. E. Thompson, J. Vacuum Sci. and Technol., 16 (January-February 1979), pp. 6-12.

Control of Substrate Tube Diameter During MCVD Preform Preparation. P. D. Lazay and W. G. French, Conference Digest (OSA—Topical Meeting on Optical Fiber Communication) (March 5, 1979), pp. 50-52.

Core Hole Screening in Lanthanide Metals. G. Creceline, G. K. Wertheim, and D. N. E. Buchanan, Phys. Rev. B, 18, No. 12 (December 15, 1978), pp. 6519-6524.

Effect of pH on the Rate of Corrosion of Gold in Acid Sulfate Solutions. B. S. Duncan and R. P. Frankenthal, J. Electrochem. Soc., 126 (January 1979), pp. 95-97.

The Intermediate Valence State in Rare Earth Compounds; Bulk and Surface Manifestations. G. K. Wertheim, J. Electron. Spectr., 15 (January 1979), pp. 5-14.

The Kinetic Photochemistry of the Marine Atmosphere. T. E. Graedel, J. Geophys. Res., 84 (1979), pp. 273-286.

Mechanical Testing Standards as Developed by the Voluntary Consensus System: Present and Future. A. Fox, Golden Gate Metals and Welding Conference Abstracts, Session 23 (January 29, 1979).

Processing and Magnetic Properties of Low-Loss and High Stability Mn-Zn Ferrites. B. B. Ghate, Mater. Sci. Res., Process. Cryst. Ceram., 11 (1978), pp. 369-379.

Sealed Extrusion-A Coating Method for Photoprinting UV Curable Liquid Resin Films. G. B. Fefferman and T. V. Lake, Fourth Radiat. Int. Conf. (September 1978), pp. 1-18.

Variable Resolution Capability for Multichannel Filter Spectrometers. P. S. Henry, Rev. Sci. Instrum., 50 (February 1979), pp. 185-192.

GENERAL MATHEMATICS AND STATISTICS

Comment on Schruben and Margolin. C. L. Mallows, J. Amer. Statist. Assoc., 73 (September 1978), p. 520.

Complexity Results for Bandwidth Minimization. M. R. Garey, R. L. Graham, D. S. Johnson, and D. E. Knuth, SIAM J. Appl. Math., 34 (May 1978), pp. 477-495.

Factor Analysis and Principal Components: The Bilinear Methods. J. B. Kruskal, The International Encyclopedia of Statistics, The Free Press (1978), pp. 307-330.

Good and Optimal Ridge Estimators. R. L. Obenchain, The Annals of Statistics, 6 (September 1978), pp. 1111-1121.

A Note on Bisecting Minimum Spanning Trees. W. M. Boyce, M. R. Garey, and O. S. Johnson, Networks, 8 (1978), pp. 187-192.

Postscript to "Transformations of Data." J. B. Kruskal, International Encyclopedia of Statistics, New York: The Free Press, Vol. 2, 1978, pp. 1055-1056.

PHYSICS

Amorphous Metal Films by Getter-Sputtering at 25°K. J. J. Hauser, R. J. Schutz, and W. M. Augustyniak, Phys. Rev., 18B (October 15, 1978), pp. 3890-3896.

Angle-Resolved Photoemission from Surface and Adsorbates. N. V. Smith, Journal de Physique, 39C4 (July 1978), pp. 161-168.

Diamagnetic Structure of Rb in Intense Magnetic Fields. N. P. Economou, R. R. Freeman, and P. F. Liao, Phys. Rev. A, 18 (December 1978), pp. 2506-2509.

The Diffraction of He Atoms at a Si(111) 7 × 7 Surface. M. J. Cardillo and G. E. Becker, Phys. Rev. Lett., 42 (February 1979), pp. 508-511.

Diffracton of Photoelectrons Emitted from Core Levels of Te and Na Atoms Adsorbed on Ni (001). D. P. Woodruff, D. Norman, B. W. Holland, N. V. Smith, H. H. Farrell, and M. M. Traum, Phys. Rev. Lett., 41 (October 16, 1978), pp. 1130-1133.

Dynamic Central Peaks and Phonon Interactions Near Structural Phase Transitions. P. A. Fleury and K. B. Lyons, Proc. of the Int'l. Conf. on Lattice Dynamics, Paris, France (1978), p. 731.

The Effect of Strain-Induced Band-Gap Narrowing on High Concentration Phosphorus Diffusion in Silicon. R. B. Fair, J. Appl. Phys., 50 (February 1979), pp. 860-868.

Effects of Atomic Order in α - and β -phase AgCd Alloys Studied by X-Ray Photoelectron Spectroscopy. G. Crecelius and G. K. Wertheim, Phys. Rev. B, 18, No. 12 (December 15, 1978), pp. 6525-6530.

Effects of Magnetic Fields on Four Wave Mixing Processes in Atomic Vapors. N. P. Economou, R. R. Freeman, and G. C. Bjorklund, Optics Letters, 3 (December 1978), pp. 209-211.

Light Scattering Determinations of Dynamic Four Point Correlation Functions. P. A. Fleury, Proc. of the NATO Advanced Study Inst. on Correlation Functions and Quasi-particle Transactions in Condensed Matter, New York: Plenum Press, 1978, pp. 325-365.

The Magnetic Behavior of an $S = \frac{1}{2}$ Amorphous Antiferromagnet. R. B. Kummer, R. E. Walstedt, S. Geschwind, V. Narayananamurti, G. E. Devlin, Phys. Rev. Lett., 40, No. 16 (April 17, 1978), pp. 1098-1100.

Magnetic Field Quantum Beats in Two-Photon Free-Induction Decay. N. P. Economou and P. F. Liao, Optics Letters, 3 (November 1978), pp. 172-174.

Nitric Acid Vapor Line Parameters Measured By Co Laser Transmittance. L. A. Farrow, R. E. Richton, and C. P. Karnas, Appl. Opt., 18 (January 1, 1979) pp. 76-81.

Piezooptic and Elastooptic Coefficients. R. F. S. Hearmon and D. F. Nelson, Landolt-Börnstein, New Series (1979), pp. 505-551.

Real-Time Autocorrelation Interferometer. R. L. Fork and F. A. Beisser, Appl. Opt., 17 (November 15, 1978), pp. 3534-3535.

The Relation of Solitons to Polaritons in Coupled Systems. D. F. Nelson, Solitons and Condensed Matter Physics, Berlin: Springer-Verlag, 1978, pp. 187-190.

Thermal Convection and Crystal Growth. P. G. Simpkins, and P. A. Blythe, Physics News in 1977, American Inst. of Physics Booklet, R-28 1 (November 1977), pp. 52-53.

Time-Resolved Photoluminescence Spectroscopy in Amorphous As_2S_3 . M. A. Bosch and J. Shah, Phys. Rev. Lett., 42, pp. 118-121.

X-ray Photoemission Study of Ce-Pnictides. Y. Beer, R. Hanger, C. Zürdrer, M. Campagna, G. K. Wertheim, Phys. Rev. B, 18 (October 15, 1978), pp. 4433-4439.

PSYCHOLOGY

Subjective Detection of Differences in Variance from Small Samples. R. L. Fike and W. R. Ferrell, Organ. Behav. Hum. Perf., 22 (December 1978), pp. 262-278.

SYSTEMS ENGINEERING AND OPERATIONS RESEARCH

Communications Privacy. A. Gersho, IEEE Commun. Soc. Mag., 16 (November 1978), p. 2.

The Complexity of the Network Design Problem. D. S. Johnson, J. K. Lenstra, and A. H. G. Kan, Networks, 8 (1978), pp. 279-285.

D. C. Welcomes MAT. B. S. Brosius and G. H. Webster, Telephony (January 1, 1979), pp. 19-23.

Digital Techniques for Speech Communications: Some New Dimensions. J. L. Flanagan, Proceedings of the IEEE International Conference on Cybernetics and Society (September 1977), pp. 1-5.

Double Phase Matching Function. D. F. Nelson, J. Opt. Soc. Amer., 68 (December 1978), pp. 1780-1781.

A New Measurement Technique For Telephone Switching Systems. R. J. Jaeger, Jr. and R. C. Stone, Jr., Pacific Telecommunications Conference Proceedings (January 8, 1979), pp. 3C24-3C33.

The Use of MIL-STD-1050 to Control Average Outgoing Quality. B. S. Liebesman, J. Qual. Tech., 11, No. 1 (January 1979), pp. 36-43.