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RESEARCH IN ELECTRONICS**

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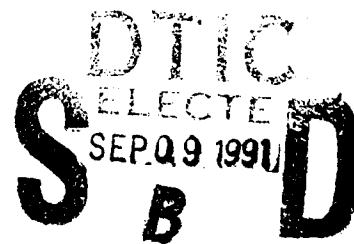
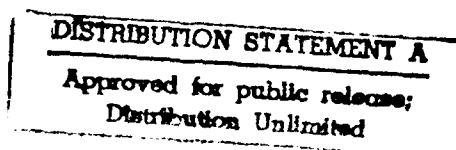
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This final report for the past three Joint Services Electronics Program contract period lists all the publications which describe the supported research along with the names of students who received the PhD or MS degree and contributed to this research.

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Kalivas, D.	PhD	1990
Kapre, Ravindrey	PhD	1991
Kim, Dojin	PhD	1989
Kirkman, G.	PhD	1990
Kuroda, Roger	PhD	1991
Len-Yi, Leu-He	PhD	1990
Shyu, Shiow Chen	PhD	1989
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JOINT SERVICES ELECTRONICS PROGRAM

RESEARCH IN ELECTRONICS

OVERVIEW

This final report on the Joint Services Electronics Program, Contract F49620-88-C-0067, covers the three year period 4/1/88 through 3/31/91.

During this period thirteen research projects were supported under this program in the areas of Solid State Electronics, Quantum Electronics, and Information Electronics. This three year period has been a very productive one from the scientific results achieved and the transfer of the results to industry and government laboratories. The results are documented in the scientific publications that have resulted from this research. Perhaps the best mode of technology transfer is through students who graduate and carry the technology with them to other laboratories and industry. Fifteen students received degrees while supported by JSEP during this period.

JOINT SERVICES ELECTRONICS PROGRAM**RESEARCH UNITS****Solid State Electronics**

- SS1-1. Selective Area Epitaxy Growth of Photonic Device Structures by Metalorganic Chemical Vapor Deposition (MOCVD), P. Daniel Dapkus**
- SS1-2 Strain Induced Metastability in Heterostructures: Some Investigations of Molecular Beam Epitaxial Growth and Interconversion of Metastable States A. Madhukar**
- SS1-3 Electro-optic Devices for Optical Information Processing and Computer Applications, A.R. Tanguay, Jr.**
- SS1-4 Optoelectronic and Quantum Structures using Pristine and Irradiated Organic Compounds, S.R. Forrest**

Quantum Electronics

- QE1-1 Research to Improve Long Wavelength Infrared Semiconductor Lasers, E. Garmire.**
- QE1-2 A Spectroscopic Study of Basic Processes in Electrically Excited Materials, M. Gundersen**
- QE1-3 Nonlinear Optical Waveguiding in Compound Semiconductors, W.H. Steier**
- QE1-4 Parallel Optical Processing in Photorefractive Materials, J. Feinberg.**

Information Electronics

- IE1-1 Spread Spectrum Receiver Design for Intense Jamming Environments, R.A. Scholtz**
- IE1-2 Basic Research in C³ Distributed Databases, V.O.K. Li**
- IE1-3 Estimation and Segmentation of Image Sequences, A.A. Sawchuk**
- IE1-4 Mathematical Modelling and Control of Complex Systems - Application to Piezoelectrically Coated Large Space Structures, E. Jonckheere.**
- IE1-5 Research in Computer Vision, R. Chellappa**

JOINT SERVICES ELECTRONICS PROGRAM

FINAL REPORT

PUBLICATIONS LIST

1. P. D. Dapkus, S. P. DenBaars, Q. Chen, W. G. Jeong, and B. Y. Maa, "The Role of Surface and Gas Phase Reactions in Atomic Layer Epitaxy," *Prog. Crystal Growth and Charact.* **19**, 137 (1989).
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