

## Pamela H. Fleming

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### Education

The Ohio State University, Columbus

Zoology

B.S., 1970

### Professional Experience

- 2007–p Assistant Staff Member, Center for Nanophase Materials Sciences, Oak Ridge National Laboratory (ORNL)
- 2007 Technical Associate, Nanomaterials Synthesis and Properties Group, Materials Science and Technology Division, ORNL
- 2003–2006 Technical Associate, Thin Film & Nanostructured Materials Group, Condensed Matter Division, ORNL
- 1976–2005 Technical Associate, Semiconductor Physics & Photovoltaic Materials Group, Solid State Division, ORNL
- 1973–1976 Lab Technician, EG&G ORTEC, Oak Ridge, Tennessee
- 1970–1973 Lab Technician, Biology Division, ORNL

### Honors and Awards

- 1997 Technical Achievement Award, Co-recipient, “Conceiving and Demonstrating a Simple Thick-film Hydrogen Sensor and Commercializing the Products to Manufacture It,” ORNL
- 1992 Portable Hydrogen Detector R&D IR-100 Award Nomination, ORNL
- 1990 Technical Achievement Award, Co-recipient, “Outstanding Work in Developing a Solar-Powered Infrared Micro-miniature Transmitting System,” ORNL

### Patents

“Thin Film Hydrogen Sensor,” R. J. Lauf, B. H. Hoffheins, P. H. Fleming, U.S. Patent #5,367,283, November 22, 1994.

### Selected Peer-Reviewed Publications:

- H. M. Christen; A. A. Puretzky; H. Cui; K. Belay; P. H. Fleming; D. B. Geohegan; D. H. Lowndes, “Rapid Growth of Long, Vertically Aligned Carbon Nanotubes Through Efficient Catalyst Optimization Using Metal Film Gradients,” *Nano Letters* **4**, 1939 (2004).
- J. Sigman; D. P. Norton; H. M. Christen; P. H. Fleming; L. A. Boatner, “Antiferroelectric Behavior in Symmetric KNbO<sub>3</sub>/KTaO<sub>3</sub> Superlattices,” *Physical Review Letters* **88**, 097601 (2002).
- J. Sigman; H. M. Christen; P. H. Fleming; L. A. Boatner; D. P. Norton, “Evidence for Antiferroelectric Behavior in KNbO<sub>3</sub>/KTaO<sub>3</sub> Superlattices,” *Materials Research Society Symposium Proceedings* **720**, 179 (2002).
- Y. W. Heo; V. Varadarajan; M. Kaufman; K. Kim; F. Ren; P. H. Fleming; D. P. Norton, “Deterministic Synthesis of ZnO Nanorods,” *Materials Research Society Symposium Proceedings* **728**, 223 (2002).
- Y. W. Heo; V. Varadarajan; M. Kaufman; K. Kim; D. P. Norton; F. Ren; P. H. Fleming, “Site-Specific Growth of ZnO Nanorods Using Catalysis-Driven Molecular-Beam Epitaxy,” *Applied Physics Letters* **81**, 3046 (2002).

- H-Y. Zhai; H. M. Christen; L. Zhang; M. Paranthaman; C. Cantoni; B. C. Sales; P. H. Fleming; D. K. Christen; D. H. Lowndes, "Growth Mechanism of Superconducting MgB<sub>2</sub> Films Prepared by Various Methods," *Journal of Materials Research* **16**, 2759 (2001).
- H-Y. Zhai; H. M. Christen; L. Zhang; M. Paranthaman; P. H. Fleming; D. H. Lowndes, "Degradation of Superconducting Properties in MgB<sub>2</sub> Films by Exposure to Water," *Superconductor Science and Technology* **14**, 425 (2001).
- B. S. Hoffheins; R. J. Lauf; P. H. Fleming; S. E. Nave, "Solid-State, Resistive Hydrogen Sensors for Safety Monitoring," *NASA STI/Recon Technical Report N 94*, 17778 (1993).
- D. D. Falter; G. T. Alley; K. G. Falter; J. M. Rochelle; K. H. Valentine; R. D. Westbrook; G. E. Jellison, Jr.; P. H. Fleming, "Development of a Solar-Powered Infrared Injection Laser Microminiature Transmitting System," p. 1081 in *International Conference on Lasers '89 Proceedings, LASERS '89*, New Orleans, LA (1990).
- J. W. Cleland; P. H. Fleming; R. D. Westbrook; R. F. Wood; R. T. Young, "Electrical Property Studies of Neutron Transmutation Doped Silicon," p. 261 in *Neutron Transmutation Doping in Semiconductors*, Ed., J. Meese, Springer Publishing, New York, NY (1979).

**Graduate and Postdoctoral Advisors:**

None

Total Graduate Students Advised: 0

Total Postdoctoral Scholars Advised: 0