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 KNbO3/KTaO3 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 KNbO3/KTaO3 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 MgB2 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 MgB2 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