



Fred H. Pollak

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Education

University of Chicago	Ph.D. Physics	1964
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Professional Experience

Director and Fellow	Society of Photo-Optical Instrumentation Engineers
Fellow,	American Physical Society

Research Interests

My research interests include the optical properties of solids, modulation spectroscopy including studies of semiconductors, semiconductor microstructures, semiconductor surfaces/ interfaces and semiconductor devices. In the field of semiconductors, research is being carried out in *In-situ* monitoring of semiconductor growth/processing. the growth and characterization of diamondlike nanocomposite thin films, Raman scattering and the effects of uniaxial stress on the optical and transport properties of semiconductors and semiconductor microstructures

Selected Publications:

- *Surface photovoltage spectroscopy characterization of a GaAlAs/InGaAs/GaAs pseudomorphic high electron mobility structure*, Cheng, Y.T., Huang, Y.S., Lin, D.Y., Tiong, K.K., Pollak, F.H., and Evans, K.R., Appl. Phys. Lett. 79, 949 (2001).
- *Temperature- dependent contactless electroreflectance and photoluminescence study of GaAlAs/InGaAs/GaAs pseudomorphic high electron mobility transistor structures*, Lin, D.Y., Huang, Y.S., Shou, T.S., Tiong, K.K., and Pollak, F.H., Appl. Phys. 90, 6421 (2001).
- *High Spatial resolution thermal conductivity of bulk ZnO (0001)*, Florescu, D.I., Mourokh, L.G., Pollak, F.H., Look, D.C., Cantwell, G., and Li, X., J. Appl. Phys 890 (2002).
- *Surface photovoltage spectroscopy and normal-incidence reflectivity characterization of a 1.3 μm InGaAlAs/InP vertical-cavity surface-emitting laser structure*, Huang, Y.S., Malikova, L., Pollak, F.H., Debray, J.P., Ting, S., and Ferguson, I., Mat. Res. Soc. Proc. 680E, E4.2 (2001).
- *MIRman investigation of the n-dopant distribution in laterally epitaxial overgrown GaN/sapphire (0001)*, Chaldyshev, V.V., Pollak, F.H., Pophristic, M., Gou, S.P., and Ferguson, I., J. Electron. Mat. 31, 631 (2002).
- *Modulated electric fields produce semiconductor spectra*, Pollak, F.H., Laser F World, July 2000, p. S9.
- *Thermal conductivity measurement GaN and AlN*, Florescu, D.I., Asnin, V.M., and Pollak, F.H., Compound Semiconductor 7, 62 (March 2001).
- *Study of semiconductor surfaces and interfaces using electromodulation*, Pollak, F.H., Surf. Interface Anal. 31, 938-953 (2001).