

John C. Wolfe

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Departmental Address
Electrical and Computer Engineering
Cullen College of Engineering

Education:

1967	BS.	Physics	University of Rochester
1974	Ph.D.	Physics	University of Rochester

Thesis Advisor(s): Gerard G. Emch

Employment History:

2003-	Director, Nanosystem Manufacturing Center
1/99-00:	Associate Dean for Research, Cullen College of Engineering, Univ. of Houston
6/96-8/98:	Interim Dean, Cullen College of Engineering, Univ. of Houston
9/1995-5/96:	Chair, Department of Electrical and Computer Engineering, Univ. of Houston
9/1976-present:	Visit. Assist. Professor (1976), Assist. Prof. (1977), Assoc. Prof. (1983), Prof. (1990), Dep't. of Electrical and Computer Engineering, Univ. of Houston

Honors and Awards:

- Halliburton Research Excellence Award, University of Houston (1991).
- Fluor-Daniel Faculty Excellence Award, University of Houston (2002)
- Program Chair: 43 rd International Symposium on Electron Ion and Photon Beam Technology and Nanofabrication, 1999, Marco Island, Florida
- Guest Editor: J. Vac. Sci. and Technology (1999).

Recent Research Highlights:

- Demonstrated sub-20 nm printing with 2 nm pattern fidelity by atom beam lithography
- Developed a flexible electrode cuff for neuronal sensing in free living locusts
- Developed a novel method for measuring silicon loss during plasma ashing of semiconductor wafers
- Developed and advanced plasma ashing tool for removing photoresist from semiconductor wafers

Lab Facilities/Expertise:

- Plasma Ashing tool
- Advanced silicon etching tools and processes
- Scanning Electron Microscope
- Atom and Ion beam lithography tools

Five Relevant Publications:

1. Dhara Parikh, Barry Craver, Hatem Nounu, Fu-on Fong, and John C. Wolfe, "Nanoscale pattern definition on non-planar surfaces using ion beam proximity lithography and conformal, plasma-deposited resist, *Journ. Microelectromechanical Systems*, Vol. 17, pp. 735-740, June 2008.
2. Barry Craver, Hatem Nounu, James Wasson, and John C. Wolfe, "Neutral particle proximity lithography: Non-contact nanoscale printing without charge-related artifacts, "*J. Vac. Sci. Technol. B*, Vol. 26, pp. 1866-1870, Nov. 2008.
3. Ananya Roy, Leonidas Ocola and J.C. Wolfe, "Shot-noise and scanning accuracy in two-dimensional neutral particle aperture array lithography," accepted, *Journ. Vac. Sci. Technology*(2009).
4. Dhara Parikh, Haleh Fotowat, Ananya Roy, Fabrizio Gabbiani, "Implantable multi-electrode sensor for monitoring neuronal signals in the locust," accepted *Journ. Va. Sci. Technology*. (2009)
5. M. Bhargava, B. Craver, Jose L. Torres, H. Guo, A. K. Srivastava, and J.C. Wolfe, "A photoresist ashing tool using a medium pressure plasma jet with high speed wafer scanning: Part 1-Source studies on unimplanted resist with O₂/N₂ reactant gas mixtures , accepted *Journ. Vac.. Sci. Technol.* (2009)