PETER FINKEL

Research Physicist
Naval Research Laboratory,
4555 Overlook Ave., SW, Washington, DC 20375
peter.finkel@nrl.navy.mil
(202) 767-4481

EDUCATION

Ph.D. Materials Science (2003) Drexel University, Philadelphia
M.S. Physics (1995), The City University of New York (CUNY)
DSc Candidate Solid State Physics (1990), Low Temperature Physics Institute, Ukraine
B.S. in Mechanical Engineering (1984) Kharkov Polytechnic University

PROFESSIONAL APPOINTMENTS

Research Physicist, NAVAL RESEARCH LABORATORY (NRL), Materials Science and Technology Division, Washington, DC 2013-current

Materials Scientist, NAVAL UNDERSEA WARFARE CENTER (NUWC), Transducers and SONAR Systems Department, Newport, RI 2008- 2013

Director of Micro/Nanofabrication - Research Assistant Professor, DREXEL UNIVERSIT, Philadelphia, PA College of Engineering 2006- 2008

Member Technical Staff /Physicist, RCA/GE/THOMSON, R&D CENTER, PA 2000- 2006

Research Scientist, PHYSICAL ACOUSTICS CORP., Princeton, NJ 1997- 2000

Research Project Engineer, EVERSON ELECTRIC Corp, Bethlehem, PA 1995 – 1997

Research Scientist, INSTITUTE FOR LOW TEMPERATURE PHYSICS AND ENGINEERING, UKRAINE ACADEMY OF SCIENCE, UKRAINE 1987- 1999

RESEARCH INTERESTS

Ferroelectrics and multiferroics, experimental solid state physics, magnetism, and materials science, with focus on magnetic and ferroelectric materials, sensors, transduction and ultrasonics. Transduction materials, sensors and physical properties of single crystal transducer materials,

PROFESSIONAL/ACTIVITIES/AWARDS

- Alan Berman Research Publication Award
- Member APS, MRS, ACerS.
- Proposal Reviewer for government agencies (DARPA, NSF, ONR)
- Technical Journal Referee and reviewer for Phys Rev B, Applied Physics Letters, Journal of Applied Physics, IEEE Trans. on Magnetics, Nature.

SELECTED RECENT RELEVANT PUBLICATONS

Total publications: 124 h-index: 23 Total citations: 1747

1. Huilong Hou, **Peter Finkel**, Margo Staruch, Jun Cui & Ichiro Takeuchi "Ultra-low-field magneto-elastocaloric cooling in a multiferroic composite device" *Nature Communications*, volume 9, Article number: 4075 (2018)
2. **P Finkel**, M Staruch, A Amin, M Ahart, SE Lofland "Simultaneous stress and field control of sustainable switching of ferroelectric phases" *Nature Scientific Reports,* Volume 5, Article number: 13770 (2015)
3. **Peter Finkel**, Ahmed Amin, Sam Lofland, Jaojin Yao, Dwight Viehland "Phase switching at low field and large sustainable strain output in domain engineered ferroic crystals" *Phys. Status Solidi* A, 1-6 (2012) / DOI 10.1002/pssa.20122831
4. Zhongqiang Hu, Tianxiang Nan, Xinjun Wang, Margo Staruch, Yuan Gao, **Peter Finkel**, Nian X. Sun , "Voltage control of magnetism in FeGaB/PIN-PMN-PT multiferroic heterostructures for high-power and high-temperature applications" , *Applied Physics Letters* 01/2015; 106(2):022901. DOI:10.1063/1.4905855 ·
5. M Staruch, J F Li, Y Wang, D Viehland, **P Finkel** "Giant magnetoelectric effect in nonlinear Metglas/PIN-PMN-PT multiferroic heterostructure" , *Applied Physics Letters* 10/2014; 105(95):152902. DOI:10.1063/1.4898039 ·
6. Jillian Kiser, Ron Lacomb, Konrad Bussmann, Christopher J Hawley, Jonathan E Spanier, Xin Zhuang, Christophe Dolabdjian, Sam Lofland, **Peter Finkel** "Magnetostrictive stress reconfigurable thin film resonators for near direct current magnetoelectric sensors" , *Applied Physics Letters* 02/2014; 104(7):072408. DOI:10.1063/1.4866044] ·
7. W. Dong, **P. Finkel**, A. Amin, C. Lynch "Giant energy conversion in [011] cut Ferroelectric Single Crystals" *Appl. Phys. Lett ,* 100, 042903 (2012)
8. Zhongqiang Hu, Tianxiang Nan, Xinjun Wang, Margo Staruch, Yuan Gao, **Peter Finkel,** Nian X. Sun , "Voltage control of magnetism in FeGaB/PIN-PMN-PT multiferroic heterostructures for high-power and high-temperature applications" , *Applied Physics Letters* 01/2015; 106(2):022901. DOI:10.1063/1.4905855 · 3.52 Impact Factor
9. M Staruch, J F Li, Y Wang, D Viehland, **P Finkel** "Giant magnetoelectric effect in nonlinear Metglas/PIN-PMN-PT multiferroic heterostructure" , *Applied Physics Letters* 10/2014; 105(95):152902. DOI:10.1063/1.4898039
10. Jillian Kiser, Ron Lacomb, Konrad Bussmann, Christopher J Hawley, Jonathan E Spanier, Xin Zhuang, Christophe Dolabdjian, Sam Lofland, **Peter Finkel** "Magnetostrictive stress reconfigurable thin film resonators for near direct current magnetoelectric sensors" , *Applied Physics Letters* 02/2014; 104(7):072408. DOI:10.1063/1.4866044]
11. **Peter Finkel**, Colin J. Murphy, Joseph Stace, Konrad Bussmann, Adam Heitmann, Ahmed Amin , Elastic stability of high coupling ternary single crystals *Applied Physics Letters* 05/2013; 102(18). DOI:10.1063/1.4804629