Curriculum Vitae for Alison Chaiken

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Work:
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Professional Interests and Skills:

Crystallization and nucleation phenomena. Advanced data storage concepts. Structure determination using x-ray techniques. Semiconductor thin films and devices. Transport and exchange coupling in magnetic thin films and multilayers.

Work Experience:

1997–present:

Principal research scientist and technical leader in Advanced Storage Department at Hewlett-Packard Laboratory in Palo Alto working on physics of III-VI semiconductor devices for a recording medium application. Techniques used include film deposition by molecular-beam epitaxy and sputtering, laser melting and recrystallization, surface potential and atomic force microscopy, and optical and x-ray characterization methods. Research supervisor for postdoc and summer students.

1992–1997:

Physicist at Lawrence Livermore National Laboratory. Projects included interlayer exchange and giant magnetoresistance in magnetic multilayers; exchange anisotropy in ferromagnet/antiferromagnet bilayers; giant magnetoresistive sensors in landmine detection and for non-destructive evaluation applications; x-ray absorption measurements on the multiple phases of iron silicides and boron nitride. Set up automated ion-beam sputtering system for deposition of silicide multilayers. Supervisor for postdoc and three undergraduate students.

1988–1991:

National Research Council postdoctoral associate at Naval Research Laboratory in the group of Dr. Gary Prinz. Studied giant magnetoresistance and exchange coupling in MBE–grown magnetic multilayers. Set up computer-controlled vibrating sample magnetometer and magneto-transport systems.

1982–1983:

Research assistant at Raytheon Research Division in Lexington, MA characterizing HgCdTe infrared photoconductive detector materials.

Education:

1983–1988:

Graduate student at the Massachusetts Institute of Technology. Obtained a PhD in physics under Prof. M.S. Dresselhaus on the thesis topic "Superconducting Properties of Ternary Graphite Intercalation Compounds." IBM Predoctoral Fellow 1985. Built a ^{3}He system for sub–Kelvin critical field measurements.

1979–1982:

Undergraduate student at Dartmouth College. Graduated cum laude with honors in physics. Teaching assistant for both lecture and lab courses.

Professional activities:

- Author of over 30 refereed publications plus many patent applications (four issued) on semiconductor and magnetic devices. My Hirsch number equals 9.
- Editorial Board, *Annual Review of Materials Science*, 1994-1999.
- Member, Defense Sciences Study Group, Institute for Defense Analyses, 2002-2003. Current DOD Secret clearance.
- Program committee co-chairman, 1998 Joint Intermag-MMM Conference.
- Long-time enthusiastic user and supporter of open-source software.
- Author of *Wikipedia* articles on technical topics.

Personal:

Born 1962 in Philadelphia. Enjoy hiking, cooking and non-commercial radio. Webmaster and graphic designer for two non-profits.

References:

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