



Luling Sun, M.S.

Curriculum Vitae

Areas of Specialization

Expert in metallurgical and materials engineering, failure analysis, design of consumer products and industrial equipments. Scanning electron microscopy and materials characterization specialist.

Employment

10/08 ~ Present **Senior Metallurgical Engineer**, Berkeley Engineering and Research Inc., Berkeley, CA

- Provide consultation in materials failure analysis of consumer products and industrial equipments. Evaluate microstructures, materials and mechanical properties, and behaviors of variety of materials to determine the best material suitable for specified applications.
- Specialist in scanning electron microscopy and energy dispersive spectrometer, optical microscope and image analysis.
- Metallurgical preparation, materials characterization and testing.

2/07 ~ 10/08 **Metallurgical Engineer**, Berkeley Engineering and Research Inc., Berkeley, CA

- Provide consultation in materials failure analysis.

1/08 ~ 12/09 **Research Assistant**, University of California, Berkeley

- Fatigue and fracture of biomedical materials & mineralized biological tissue.
- A comparison of techniques for the measurement of bone mineral density.
- Effect of aging and hydration on mechanical behavior of human dentin.
- *In situ* crack growth in human bone and dentin with real-time imaging.

1/08 ~ 5/07 **Research Assistant**, University of California, Berkeley

- Nanostructures of diblock copolymer thin films.

4/05 ~ 8/07 **Research Assistant**, Lawrence Berkeley National Laboratory

- Metallurgical preparation, fabrication, characterization & testing of superconducting accelerator magnets for High Energy Physics (HEP) applications, microstructural, chemical, & metallurgical failure analysis.
- SEM/EDS analysis, optical microscope & image analysis
- Mentorship of research interns and student researchers

8/04 ~ 12/04 **Student Researcher**, Engineering Mechanics: Bridge Project, U.C. Berkeley

- Compete on the best alternative design of the Bay Bridge.

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Education

12/09, *M.S. Materials Science and Engineering*, University of California, Berkeley.
Thesis: Structural and Properties Studies on the Mechanical Behavior of Mineralized Biological Tissues.

5/07, *B.S. Materials Science and Engineering*, University of California, Berkeley.

Publications

“Osteopontin Deficiency Increases Bone Fragility but Preserves Bone Mass” by P. J. Thurner, C. G. Chen, S. Ionova-Martin, **L. Sun**, A. Harman, A. Porter, J. W. Ager III, R. O. Ritchie, and T. Alliston, *Bone*, 2010 (doi.org/10.1016/j.bone.2010.02.014).

“Noncollagenous Proteins and Bone Mechanics - From Protein Networks to Osteopontin-deficient Mouse Bones” by P. J. Thurner, C. Chen, B. Zappone, S. Ionova, S. Lam, J. Adams, J. C. Weaver, **L. Sun**, G. E. Fantner, J. W. Ager, P. K. Hansma, R. O. Ritchie, T. Alliston, 22nd European Conference on Biomaterials, January 2009.

“Transport and Magnetization Properties of Rolled RRP Nb₃Sn Strands” by A. K. Ghosh, L. D. Cooley, D. R. Dietderich, **L. Sun**, 20th Biennial Conference on Magnet Technology, August 2007.

Honors and Awards

Elaine C. Shen Memorial Prize for outstanding leadership and scholastic achievements, January 2007.

UC Berkeley Alumni Leadership Scholarship, 2003-2007.

President’s Leadership Award for 21st Century, March 2005.

Teaching Experience

1/08 ~ 5/08 Materials Characterization, U.C. Berkeley

- Instruct and provide experimental training and supervision for upper division undergraduates on various methods of X-ray analysis.
- Assist the professor on course planning and grading.

8/07 ~ 11/07 Tutor.com Homework Help Program.

- Provide live homework help in math and science online.

9/06 ~ 5/07 Field Trip for Materials Science Engineers, U.C. Berkeley

- Organize and arrange corporate tours for engineering students.