Min-Hua Ivy Chen

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Education

University of Michigan, Rackham Graduate School, Ann Arbor, MI
- PhD candidate in Materials Science. Degree started September 2010

Columbia University, School of Engineering and Applied Sciences, New York, NY
- Bachelor of Science in Materials Science and Engineering, Cum Laude, May 2010

The Lawrenceville School, Lawrenceville, NJ
- Cum Laude, May 2006

Achievements and Scholarships

Tau Beta Pi, The Engineering Honor Society, Michigan Gamma (Elected 2012)

Dean's List (Fall 2006–Spring 2007, Spring 2008–Fall 2009)

Publications

Feng Wang, Hui-Chia Yu, Min-Hua Chen, Lijun Wu, Nathalie Pereira, Katsuyo Thornton, Anton Van der Ven, Yimei Zhu, Glenn G. Amatucci, and Jason Graetz. Tracking lithium transport and electrochemical reactions in nanoparticles. *Nature Communications*, 3, NOV 2012.

Research Experience

University of Michigan, Materials Science Department, Ann Arbor, MI (Fall 2010–present)
Researching conversion cathode lithium-ion battery materials using first principles methods. Participating in rewriting and restructuring of the cluster expansion code previously developed by group members. Lead the development of C++ program for phonon calculations. Adviser: Prof. Anton Van der Ven.

Columbia University, SEAS, New York, NY (Summer 2009–Spring 2010)
Assisted group members in studying mixed phase solidification induced by crystallization of Si samples with a continuous-wave laser. Characterized samples using atomic force microscopy, scanning electron microscope, and electron backscatter diffraction. Adviser: Prof. James Im.

Columbia University, SEAS, New York, NY (Fall 2007–Spring 2009)
Participated in crack formation research involving electrophoretic deposition of CdSe nanoparticles and observed results using video microscopy. Continued to work on self-assembly of binary nanoparticle superlattices and briefly on carbon nanotube hybrid materials. Trained to use the thermal evaporator, spectrometer, and mask aligner. Adviser: Prof. Irving Herman.

Dana Farber Cancer Institute, Radiation Oncology Department, Boston, MA (Summer 2005)
Assisted lab members in finding various patterns in gene sequences using bioinformatic techniques to search through NCBI databases in order to understand the proteins involved in the Fanconi Anemia DNA Repair System. PI: Dr. Alan D'Andrea.

Teaching Experience

Columbia University, Department of Mathematics – Teaching Assistant (Fall 2009–Spring 2010)

Term	Class		Instructor
Fall 2009	MATH V1101	Calculus I	Lindsay Piechnik
Spring 2010	MATH V1101	Calculus I	Lan-Hsuan Huang

Leadership and Additional Experience

Columbia Science Review, Columbia University – Reviewer and editor (Spring 2006–Spring 2009)
Reviewed submitted articles and edited accepted articles for publication.

Columbia Science Review, Columbia University – Webmaster (Spring 2009–Fall 2010)
Maintained the Columbia Science Review website.

Columbia Daily Spectator, Columbia University – Staff writer (Fall 2006–Spring 2008)
Wrote articles and served as Engineering Student Council Beat Chief and Community Impact Beat Chief.

Columbia Daily Spctator, Columbia University – Staff photographer (Fall 2006–Fall 2007)
Took photographs for news articles.

Small Miracles Foundation, Columbia University – Music instructor (Fall 2006–Spring 2007)
Participated in a volunteer music program by teaching a second grader piano for half an hour each week.

Columbia University Ballroom Dance Team – Team member (Fall 2006)
Trained and participated in competitions with the team.

Computing Skills

Programming: C/C++, Fortran, Java, Python, LaTeX, Bash, Awk, MATLAB, Gnuplot

Operating Systems: Linux, Mac OS X, Windows

Software VASP, Maya, MS Word, PowerPoint, Excel

Languages

Bilingual in English and Mandarin

French - proficient