

NEVIN NAGUIB

6520 Double Eagle Dr., Unit #425
Woodridge, IL 60517
(312)399-3526

E-mail: nevin.naguib@anl.gov

EDUCATION

Drexel University, Philadelphia, PA
Ph.D. in Materials Science and Engineering, 2004
Thesis topic: Chemical Modification and Filling of Carbon Nanotubes
GPA: 3.89/4.0
University of Illinois at Chicago, Chicago, IL
Bachelors of Science in Chemistry, 2000
Graduated with the highest distinction and college honors
Minor in Mathematics and Art History
GPA: 4.9/5.0

CITIZENSHIP

U.S. Citizen

COURSE WORK

Carbon Nanostructures and Nanotechnology; Introduction to MEMS; Entrepreneurship and Business Planning; Polymers; Metals; Ceramics; Thermodynamics; Mechanical Behavior of Materials; Numerical Methods; Chemical Analysis of Materials; Instrumental and Analytical Chemistry; Advanced Inorganic; Organic and Physical Chemistry; Physics; Calculus; Differential Equations; Art History and Introduction to Sociology and Archeology.

WORK EXPERIENCE

July 2004-present

Argonne National Laboratory, Materials Science Division
Post doctoral Researcher and Enrico Fermi Scholar
Research on Ultra Nanocrystalline Diamond (UNCD) using microwave plasma chemical vapor deposition. Investigation of UNCD applications in thin film technologies, MEMS and in biomedical devices.

Sept 2000-July 2004

Drexel University, Department of Materials Science and Engineering
Research Assistant
Research on *in-situ* Chemical Experiments in Carbon Nanotubes, where carbon nanotubes are filled with different fluids and tested for potential nanofluidics devices such as drug delivery or pumping fluids in the nanoscale.

Sept 2003-Nov 2003

Tokyo Institute of Technology, Department of Materials Science
Visiting Researcher

Summer 2000

Abbott Research Labs, Department of Chemical Analysis
Chemical Development Chemist

1998-1999

University of Illinois at Chicago, Department of Chemistry.
Teaching Assistant for Organic and General Chemistry.
Supervised research on Electro-Oxidation and Kinetics Experiments in Fuel Cells.

1997-2000

University of Illinois at Chicago,
Tutor in the Honors College

Summer 1997

University of Illinois at Chicago, Department of Chemistry
Supervised research on the Decomposition of Aryl Substituted Ylides.

ACTIVITIES

- Reviewed proposals including FESEM proposal to Drexel University as well as Raman Microspectroscopy that serves the Philadelphia Region.
- Super user of the Raman Micro spectroscopy in Drexel University.
- Supervising and working with undergraduates.
- Invited for a session chair American Chemical Society conference, New York 2003
- Founder of Materials Research Society (MRS) Chapter at Drexel University.
- Social Chair of the graduate student association of Materials and Science Engineering Department at Drexel University.

SPECIAL EXPERTISE

Chemical vapor deposition (CVD), specifically new microwave plasma chemical vapor deposition (PECVD) technique, Raman Microspectroscopy, FT-IR Spectroscopy, SEM, TEM, and HT-TEM, ESEM, NMR, AFM, NSOM, HPLC, GC and GC/MS.

PROFESSIONAL HONORS AND AWARDS

- U.S. Department of Energy Enrico Fermi Scholarship, Argonne National Laboratory, 2004.
- Drexel Nanotechnology Certificate recipient, 2004.
- NSF- IGERT Fellowship Recipient: Drexel University, 2002- 2004
- Dean's Fellowship Recipient: Drexel University, September 2002- 2004
- Second Place Best Poster Award in American Society of Materials (ASM) Philadelphia Chapter, April 2002
- Koerner Fellowship Recipient: Drexel University, September 2001
- National Collegiate Award Winner in Materials Engineering, August 2001
- Best Poster Award from Drexel University in the Annual Research Day, May 2001
- Dean's List: The University of Illinois at Chicago, 1996
- President's List: University of Illinois at Chicago, 1996
- Honors College Member: University of Illinois at Chicago, 1996-2000
- NSF GK-12 Fellowship Acceptance: University of Illinois at Chicago, August 2000
- National Honor Key Society Member, 1995 to Present.
- Graduated from College with the Highest Distinction, and University Honors.
- NATO-NSF travel Grant to attend NATO-ASI, Antalya, Turkey, 2003.
- American Ceramics Society (ACerS) travel grant to Nagoya, Japan, 2003
- American Vacuum Society (AVS) travel grants to San Francisco, California, 2001 and Baltimore, Maryland, 2003.

BUSINESS AWARDS

- Second place winner in the Baiada Business Entrepreneur Competition Phase III, \$10,000 award for a Business plan dealing with a novel disc replacement system in the human backbone.
- Winner in the Baiada Business Entrepreneur Competition Phase I and Phase II.
- Semi-finalist in the International Business Plan Competition March 2004.

PROFESSIONAL SOCIETIES

- Active honor member in the American Chemical Society (ACS).
- Materials Research Society (MRS).
- American Vacuum Society (AVS).
- American Society of Materials (ASM).

SELECTED PUBLICATIONS

- 1- **Naguib, N.**, Ye, H., Gogotsi, Y., Yazicioglu, A. G., Megaridis, C. M., Yoshimura, M. "OBSERVATION OF WATER CONFINED IN NANOMETER CHANNELS OF CLOSED CARBON NANOTUBES" *Nano letters*, in press, 2004
- 2- Ye, H., **Naguib, N.**, Gogotsi, Y. "OPENING MULTIWALL CARBON NANOTUBES WITH ELECTRON BEAM" *Nanoengineered Nanofibrous Materials*, S. Guceri, V. Kuznetsov, Y. Gogotsi (Eds.), Kluwer, Dordrecht, NL, pp. 415-422 (2004).
- 3- Yazicioglu, A.G., Megaridis, C.M., **Naguib, N.**, Ye, H., Gogotsi, Y. "AQUEOUS FLUIDS IN CARBON NANOTUBES: ASSISTING THE UNDERSTANDING OF FLUID BEHAVIOR AT THE NANOSCALE" *Nanoengineered Nanofibrous Materials*, S. Guceri, V. Kuznetsov, Y. Gogotsi (Eds.), Kluwer, Dordrecht, NL, pp. 399-406 (2004)
- 4- Ye, H., **Naguib, N.**, Gogotsi, Y., Yazicioglu, A. and Constantine, M. "WALL STRUCTURE AND SURFACE CHEMISTRY OF HYDROTHERMAL CARBON NANOFIBERS" *Nanotechnology* 15, 232-236 (2004).
- 5- Lam, H., Titchenal, N., **Naguib, N.**, Ye, H., Gogotsi, Y. and Ko, F. "ELECTROSPINNING OF CARBON NANOTUBE REINFORCED COMPOSITES FIBRILS AND YARNS" *MRS* (2003).
- 6- Ko, F., Gogotsi, Y., Ali, A., **Naguib, N.**, Ye, H., Yang, G., Li, C. and Willis, P. "ELECTROSPINNING OF CONTINUOUS CARBON NANOTUBE-FILLED NANOFIBER YARNS" *Advanced Materials Research*, 15 (14), 1161-1165 (2003).
- 7- Gogotsi, Y., **Naguib, N.** and Libera, J. "IN-SITU CHEMICAL EXPERIMENTS IN CARBON NANOTUBES" *Chemical Physics Letters* 365, 354-360 (2002).
- 8- Gogotsi, Y., **Naguib, N.**, Ye, H., Yazicioglu, A. and Megaridis, M. "ANALYSIS OF FLUID IN HYDROTHERMAL CARBON NANOTUBES" in Fullerenes Vol. 12: The exciting World of Nanocages and Nanotubes, *Proc. Electrochemical Society, PV 2002-12, Ed. By P.V., Kamat, D.M. Guldi, K.M. Kadish, The Electrochemical Society*, pp. 451-459 (2002).
- 9- Ko, F., Khan, S., Ali, A., Gogotsi, Y., **Naguib, N.**, Yang, G., Li, C., Shimoda, H., Zhou, O., Bronikowski, M., Smalley, R. and Willis, P. "STRUCTURE AND PROPERTIES OF CARBON NANOTUBE REINFORCED NANOCOMPOSITES" *The American Institute of Aeronautics and Astronautics Journal*, AIAA 1426 (2002).
- 10- Featured in "POST DOCS AND GRADUATE STUDENTS" in *Nature* 425 (2003).

SELECTED CONFERENCE PRESENTATIONS

- Electrochemical Society Meeting in Washington, DC, March 2001
- Drexel/MCP Hahnemann Research Day "Best Poster Award", May 2001
- Annual Technical Conference of the American Society of Composites, Blacksburg, VA, Sept. 2001
- American Vacuum Society, the 48th International Symposium of the Solid Surfaces in San Francisco, CA, October 2001
- Materials Research Society Meeting in Boston, MA, November 2001
- Electrochemical Society Meeting in Philadelphia, PA, May 2002
- Research Day at Drexel University, Philadelphia, PA, May 2002
- 2002 International Conference Solvo-Thermal Reactions, New Brunswick, NJ, July 2002
- Gordon Research Conference on High Temperature Materials, Colby College, Maine, August 2002
- Texcomp International Textile Composites Conference in Philadelphia, PA, September 2002
- NATO-ASI conference in Antalya, Turkey, September 2003
- American Ceramics Society in Nagoya, Japan, September 2003
- IUMRS-ICAM in Yokohama, Japan, October 2003
- **Invited Speaker** in Tokyo Institute of Technology, Tokyo, Japan, October 2003
- **Invited Speaker** in National Institute of Materials Science (NIMS), Tsukuba, Japan, October 2003
- American Vacuum Society (AVS), Baltimore, Maryland, November 2003
- Materials Research Society (MRS), Boston, Massachusetts, December 2003.

REFERENCES: Available upon request.