AMIT SHAVIT

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EDUCATION

Ph.D. in Chemical and Biomolecular Engineering *University of Pennsylvania* (Philadelphia, PA) *Expected May 2015*

B.S. in Chemical Engineering *University of Massachusetts Amherst* (Amherst, MA) *May 2010*

- Graduated *summa cum laude* in Chemical Engineering with a minor in Chemistry • **GPA:** 3.81

RELEVANT EXPERIENCE

University of Pennsylvania – *Ph.D. Candidate*, Philadelphia, PA *Fall 2010 – Present*

Dissertation Title: *Nanomechanics of Glassy Polymers Under Confinement* • Advisor: Robert Riggleman

- Developed algorithms and code to analyze confined glassy polymers using Molecular Dynamics simulations
- Studied glass-forming polymers in free-standing films, in supported films, and in pillar geometries
- Published four first-author papers in reputable journals; presented research in 17 local and national presentations

Academia Sinica – *National Science Foundation EAPSI Fellow*, Taipei, Taiwan *Summer 2013*

- Investigated slit confinement of polymer chains (*e.g.*, DNA) using Brownian Dynamics simulations
- Formed a lasting collaboration and presented results in several presentations and reports to NSF

University of Colorado Boulder – *NSF Research Fellow*, Chemical Engineering Dept., Boulder, CO *Summer 2009*

- Researched the wettability and anchoring of nematic liquid crystals (LCs) at the solid/LC interface using a two-component mixture of octadecyltriethoxysilane (C18) and ethyltriethoxysilane (C2)
- Placed third in the summer poster competition and awarded to present in AIChE conference in 2009; published results in Noonan, P.S., **Shavit, A.**, Acharya, B.R., Schwratz, D.K. *App. Mat. & Int.* (2011)

University of Massachusetts Amherst – *Research Assistant & Honors Thesis*, Amherst, MA *Fall 2007 – Spring 2010*

- Proposed and developed a multi-parameter study on *Taxus cuspidata* cell cultures
- Successfully optimized and reduced the time of a *Taxus* staining protocol by 75 percent

Millipore Corporation – *Intern*, Chromatography Department, Bedford, MA *Summer 2008, Winter 2009*

- Researched impurities clearance and product yield in multiple reuse Protein A chromatography media
- Summarized results in two papers published within the company and a departmental presentation

SELECTED AWARDS

Awards: Audience Favorite Talk (*U. Penn 2014*) • Best Poster (*U. Penn 2013*) • NSF EAPSI Fellow (*NSF 2013*)
Scholarships: Chris Gagne (*U. Mass 2008*) • Honors Grant (*U. Mass 2008*) • Engineering Alumni (*U. Mass 2007*)

SELECTED PUBLICATIONS

Shavit, A. and Riggleman, R.A. (2014). Physical aging and the local dynamics of glass-forming polymers under nanoscale confinement. *Journal of Physical Chemistry B*, *118*(30), 9096-9103.

Shavit, A. and Riggleman, R.A. (2014). Strain localization in glassy polymers under cylindrical confinement. *Physical Chemistry Chemical Physics, 16*(22), 10301-10309.

Shavit, A. and Riggleman, R.A. (2013). Influence of backbone rigidity on nanoscale confinement effects in model glass-forming polymers. *Macromolecules*, *46*(12), 5044-5052.

Shavit, A., Douglas, J., & Riggleman, R.A. (2013). Evolution of collective motion in a model glass-forming liquid during physical aging. *Journal of Chemical Physics*, *138*(12A528), 1-6.

LEADERSHIP ACTIVITIES

Graduate Student Symposium – University of Pennsylvania *2014*

- Co-organized 2014 symposium; invited attendees; developed program; created symposium website

Excellence in Teaching Award – University of Pennsylvania Center of Teaching and Learning *Fall 2012*

- Developed teaching philosophy; discussed methods for engaging students; received feedback on teaching style

Mentor in Summer Academy in Applied Science and Technology – University of Pennsylvania *Summer 2012*

- Mentored six high school students to develop research projects meant to maximize *Taxol* production

V.P. of International Society of Pharmaceutical Engineers – University of Massachusetts Amherst *2008*

- Coordinated events, informed, motivated and recruited new students to the ISPE organization

SKILLS

C & C++, Python, Linux, BASH, MATLAB, Parallel Computing, Mathematica, Aspen, LaTeX, and MS Office Suite