Ph.D.

YEKATERINA ROKHLENKO

(201) 982-5399 ● YEKATERINA.ROKHLENKO@YALE.EDU

2 Livingston St., Apt A31
New Haven, CT 06511

EDUCATION:

Yale University, Graduate School of Arts and Sciences**,** New Haven, CT — August 2012- present
PhD Candidate, Chemical and Environmental Engineering — Expected 2017
Master of Philosophy, Chemical and Environmental Engineering — May 2015
Master of Science, Chemical and Environmental Engineering — January 2014

Cornell University, College of Arts and Sciences**,** Ithaca, NY — December 2011
Bachelor of Arts in Chemistry and Chemical Biology, *Cum Laude* — GRE: **790** Q/**640** V
Dean's List (Fall 2010, Spring 2011, Fall 2011), Tanner Dean Scholar — Cumulative GPA: **3.59**

RESEARCH EXPERIENCE:

Yale University, Chinedum Osuji Lab, New Haven, CT — August 2012 – present
Graduate Research Assistant

- Studying underlying physical phenomena occurring during magnetic alignment of block copolymers
- Current research focuses on the role of grain size and intrinsic anisotropy in polymers lacking crystalline and liquid-crystalline moieties

New York University, Nicholas Geacintov Lab, New York, NY — June 2011-August 2011, Jan 2012-August 2012
Research Associate

- Used in-house flash photolysis set-up to probe reaction dynamics of one election oxidation of guanine bases in DNA by $CO_3^{\bullet-}$ or $SO_4^{\bullet-}$ radicals
- Identified products of single and double strand DNA oxidation using HPLC, enzymatic digestion, and MALDI-TOF techniques

Boyce Thompson Institute, Frank Schroeder Lab, Ithaca, NY — May 2010-December 2011
Research Assistant

- Identified novel compounds produced by gene 101700 in fungus *Aspergillus flavus* using column chromatography and NMR techniques
- Once structure was determined, developed synthesis plan and synthesized compounds; followed with HPLC/MS verification
- Tested activity of compounds with bioassays to determine antibacterial properties

PUBLICATIONS:

1. **Rokhlenko, Y**., Zhang, K., Gopinadhan, M., Larson, S.R., Majewski, P.W., Yager, K.G., Gopalan, P. O'Hern, C. S., Osuji. C. O. "Magnetic alignment of block copolymer microdomains by intrinsic chain anisotropy. *Phys. Rev. Lett.* **2015** 115, 258302 (selected as Editor's Suggestion and featured in Physics as Focus Story: http://physics.aps.org/articles/v8/124)

2. Squires A.M., Akbar, S., Tousley, M.E., **Rokhlenko, Y**., Singer, J.P., Osuji, C.O. "Experimental Evidence for Proposed Transformation Pathway from the Inverse Hexagonal to Inverse Diamond Cubic Phase from Oriented Lipid Samples." *Langmuir* **2015,** 31 (28), pp 7707-7711

3. **Rokhlenko, Y**., Cadet, J., Geacintov, N.E., and Shafirovich, V. "Mechanistic Aspects of Hydration of Guanine Radical Cations in DNA." *J. Am. Chem. Soc.* **2014**, 136 (16), pp 5956-5962

4. **Rokhlenko, Y**., Geacintov, N.E., and Shafirovich, V. "Lifetimes and Reaction Pathways of Guanine Radical Cations and Neutral Guanine Radicals in an Oligonucleotide in Aqueous Solutions." *J. Am. Chem. Soc.* **2012**, 134 (10), pp 4955–4962