

## Biographical Sketch

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**Name:** Yakov Lapitsky

**Organizational Affiliation:** University of Toledo

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### (a) Education and Training

Institution	Location	Degree	Major Field	Year
University of Minnesota	Minneapolis, MN	B.S.	Chemistry	2001
University of Minnesota	Minneapolis, MN	B.Ch.E.	Chemical Engineering	2001
University of Delaware	Newark, DE	Ph.D.	Chemical Engineering	2006
University of Toronto	Toronto, ON	Postdoc	Chemical and Biomedical Engineering	2006 – 2009

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### (b) Appointments

Associate Professor of Chemical and Environmental Engineering, University of Toledo (2014 – Present)

Assistant Professor of Chemical and Environmental Engineering, University of Toledo (2009 – 2014)

### (c) Publications

#### Publications Most Closely Related to the Proposed Project (out of 26 total):

Lawrence, P.G.; Patil, P.S.; Leipzig, N.D.; Lapitsky, Y. Ionically crosslinked polymer networks for the multiple-month release of small molecules. *ACS Appl. Mater. Interfaces* **8**, 4323-4335 (2016).

Lawrence, P.G.; Lapitsky, Y. Ionically crosslinked poly(allylamine) as a stimulus-responsive underwater adhesive: Ionic strength and pH effects. *Langmuir* **31**, 1564-1574 (2015).

Huang, Y.; Lawrence, P.G.; Lapitsky, Y. Self-assembly of stiff, adhesive and self-healing gels from common polyelectrolytes. *Langmuir* **30**, 7771-7777 (2014).

de Silva, U.K.; Weik, B.E.; Lapitsky, Y. Simple preparation of polyelectrolyte complex beads for the long-term release of small molecules. *Langmuir* **30**, 8915-8922 (2014).

Huang, Y.; Lapitsky, Y. Determining the colloidal behavior of ionically crosslinked polyelectrolytes with isothermal titration calorimetry. *J. Phys. Chem. B* **117**, 9548-9557 (2013).

#### Other Significant Publications:

Huang, Y.; Cai, Y.; Lapitsky, Y. Factors affecting the stability of chitosan/tripolyphosphate micro- and nanogels: Resolving the opposing findings. *J. Mater. Chem. B* **3**, 5957-5970 (2015).

Okoye, N.H.; de Silva, U.K.; Wengatz, J.A.; Lapitsky, Y. Photodirected assembly of polyelectrolyte complexes. *Polymer* **60**, 69-76 (2015).

Lapitsky, Y. Ionically crosslinked polyelectrolyte nanocarriers: Recent advances and open problems. *Curr. Opinion Colloid Interface Sci.* **19**, 122-130 (2014).

Huang, Y.; Lapitsky, Y. Salt-assisted mechanistic analysis of chitosan/tripolyphosphate micro- and nanogel formation. *Biomacromolecules* **13**, 3868-3876 (2012).

Huang, Y.; Lapitsky, Y. Monovalent salt enhances colloidal stability during the formation of chitosan/tripolyphosphate microgels. *Langmuir* **27**, 10392-10399 (2011).

#### (d) Synergistic Activities

Initiated and organized the first four of the University of Toledo's *Annual Chemical and Environmental Engineering Graduate Research Symposia*. These symposia allow UT's chemical engineering graduate students to present their research in front of the department's faculty and industrial contacts, thereby developing their presentation and networking skills (05/2012, 05/2013, 05/2014 and 05/2015).

Served as guest lecturer for the *Engineering for Teachers of Migrant Students* (ETMS; CIVE 4950/5940) course offered by the University of Toledo's College of Engineering. This course provides professional development and graduate training to math and science teachers in secondary-schools across Ohio, and aims to advance the academic performance of children of migrant farm workers (03/2010 – Present).

Taught middle school students as part of University of Toledo's EXCEL summer outreach program, which engages Toledo Public School students who are members of underrepresented groups (i.e., girls and underrepresented minorities) in pre-college academic programs. The PI's participation in the EXCEL program has exposed nearly 300 of Toledo's middle school students to career opportunities in polymer science and engineering, and to stimulus-responsive soft materials (06/2011 – Present).

Organized/co-chaired the *Polymer Colloids* program at the *84th ACS Colloid and Surface Science Symposium* (06/2010) and the *Soft Interfaces and Self-Assembly of Surfactants and Biomolecules* programs at the *85th ACS Colloid and Surface Science Symposium* (06/2011)

Peer-reviewed for a variety of journals including: *ACS Applied Materials & Interfaces*, *Advanced Functional Materials*, *Biomacromolecules*, *Biomaterials*, *Chemistry of Materials*, *Journal of Physical Chemistry*, *Journal of Materials Chemistry*, *Langmuir*, *Macromolecules*, *Nano Letters* and *Soft Matter*

#### (e) Collaborators and Other Affiliations

##### • Collaborators and Co-Editors

Bryant-Friedrich, Amanda	University of Toledo, USA
Leipzig, Nic	University of Akron, USA
Liberatore, Matthew	University of Toledo, USA
Mao, Guangzhao	Wayne State University, USA
Mukhopadhyay, Ashis	Wayne State University, USA
Siqueira, Walter	University of Western Ontario, Canada
Seo, Youngwoo	University of Toledo, USA

##### • Graduate Advisors and Postdoctoral Sponsors

Eric W. Kaler, University of Minnesota (Graduate Advisor)

Molly S. Shoichet, University of Toronto (Postdoctoral Sponsor)

##### • Thesis Advisor (total of 5 MS/PhD thesis students and 2 other postgraduates)

Doctoral Students:	Yan Huang	BASF (12/2014)
	Yuhang Cai	(in progress; anticipated graduation: 8/2016)
	Udaka de Silva	(in progress; anticipated graduation: 5/2017)
Masters Students:	Patrick Lawrence	Lincoln Electric (12/2014)
	Brandon Saner	(in progress; anticipated graduation: 05/2016)
Other Postgraduates:	Njideka Okoye	Tennessee Tech (6/2011 – 8/2012)
	Rajasekhar Anumolu	(10/2013 – 4/2014)