

BRIAN C. TRINQUE

EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN, *Department of Chemistry and Biochemistry, Austin, TX*

- Pursuing Ph.D. in Synthetic Organic-Polymer Chemistry with C. Grant Willson
- Expected Graduation: Summer 2003

UNIVERSITY OF RHODE ISLAND, *College of Arts and Sciences, Kingston, RI*

- B.A. in Biology, Magna Cum Laude
- B.A. in English, Magna Cum Laude

TECHNICAL EXPERIENCE

1999-present Graduate Research Assistant, University of Texas at Austin, Austin, TX; Advisor: Prof. C. Grant Willson.

- Developed and optimized the synthesis of novel fluorine-containing monomers and polymers for 157 nm photoresist applications
- Developed and optimized the synthesis of novel silicon-containing monomers for top surface lithographic imaging
- Evaluated lithographic capabilities of novel organic materials utilizing next-generation lithographic equipment including variable angle spectroscopic ellipsometry (VASE), vacuum-UV spectrometry, and an Exitech 157 nm Microstepper

1998-1999 Undergraduate Research Assistant, University of Rhode Island, Kingston, RI; Advisor: Prof. Robert L. Rodgers

- Examined the effect of diabetes and hypertension on the heart and hormonal regulation of cardiac function and metabolism of rats
- Executed isolated heart perfusion and radioisotope metabolic techniques
- Assessed cardiac function

1997-1988 Undergraduate Research Assistant, University of Rhode Island, Kingston, RI; Advisor: Prof. George Tremblay

- Worked in biochemical and nutritional study of Atlantic Salmon
- Executed plasma glucose, plasma chloride, liver glycogen, and gill ATPase assays
- Responsible for care, handling, and dissection of animals

HONORS & AWARDS

- Phi Beta Kappa, *University of Rhode Island*, 1999
- University of Rhode Island Presidential Excellence Award in Biology, 1999
- American Heart Association Undergraduate Research Fellowship, 1999
- Dean's List, *University of Rhode Island*, 1995-1999
- University of Rhode Island Centennial Scholar, 1995-1999

PUBLICATIONS

Lin, E.K.; Soles, C.L.; Goldfarb, D.L.; Trinqué, B.C.; Burns, S.D.; Jones, R.L.; Lenhart, J.L.; Angelopoulos, M.; Willson, C.G.; Satiya, S.K.; Wu, W. *Direct Measurement of the Reaction Front in Chemically Amplified Photoresists with Nanometer Resolution*. Submitted

Trinqué, B.C.; Osborn, B.P.; Chambers, C.R.; Hsieh, Y.T.; Corry, S.; Chiba, T.; Hung, R.J.; Tran, H.V.; Zimmerman, P.; Miller, D.; Conley, W.; Willson, C.G. *Advances in Resists for 157 nm Photolithography*. **Proc. SPIE-Int. Soc. Opt. Eng.** **2002**, in press.

Conley, W.; Trinqué, B.C.; Miller, D.; Zimmerman P.; Kudo, T.; Dammel, R.; Romano, A.; Willson, C.G. *Negative Photoresists for 157 nm Microlithography*. **Proc. SPIE-Int. Soc. Opt. Eng.** **2002**, in press.

Trinqué, B. C.; Hung, R.J.; Chambers, C.R.; Pinnow, M.J.; Tran, H.V.; Wunderlich, J.; Hsieh, Y.T.; Thomas, B.H.; Shafer, G.; DesMarteau, D.D.; Conley, W.; Willson, C.G. *Recent Advances in Resists for 157 nm Microithography*. **J. Vac. Sci. Technol. B** **2002**, *20*, 531-536

Hung, R. J.; Tran, H. V.; Trinqué, B. C.; Chiba, T.; Yamada, S.; Sanders, D.; Connor, E. F.; Grubbs, R. H.; Klopp, J. M.; Frechet, J. M.; Thomas, B. H.; Shafer, G. J.; DesMarteau, D. D.; Conley, W.; Willson, C.G. *Resist Materials for 157 nm Microlithography: An Update*. **Proc. SPIE-Int. Soc. Opt. Eng.** **2001**, *4345*, 385-395

Tran, H. V.; Hung, R. J.; Chiba, T.; Yamada, S.; Mrozek, T.; Hsieh, Y.-T.; Chambers, C. R.; Osborn, B. P.; Trinqué, B. C.; Pinnow, M. J.; Sanders, D. P.; Connor, E. F.; Grubbs, R. H.; Conley, W.; MacDonald, S. A.; Willson, C. G. *Fluoropolymer Resist Materials for 157 nm Microlithography*. **J. Photo. Sci. Technol.** **2001**, *14*, 669-674.

Brodsky, C. J.; Trinqué, B. C.; Johnson, H. F.; Willson, C. G. *Advances in Graft Polymerization Lithography*. **Proc. SPIE-Int. Soc. Opt. Eng.** **2001**, *4343*, 415-426.

Brodsky, C.; Byers, J.; Conley, W.; Hung, R.; Yamada, S.; Patterson, K.; Somervell, M.; Trinqué, B.; Tran, H. V.; Cho, S.; Chiba, T.; Lin, S.-H.; Jamieson, A.; Johnson, H.; Vander Heyden, T.; Willson, C. G. *157 nm Resist Materials: A Progress Report*. **J. Vac. Sci. Technol., B** **2000**, *18*, 3396-3401.

Chiba, T.; Hung, R. J.; Yamada, S.; Trinqué, B.; Yamachika, M.; Brodsky, C.; Patterson, K.; Heyden, A. V.; Jamison, A.; Lin, S.-H.; Somervell, M.; Byers, J.; Conley, W.; Willson, C. G. *157 nm Resist Materials: A Progress Report*. **J. Photo. Sci. Technol.** **2000**, *13*, 657-664

PRESENTATIONS AT CONFERENCES

Trinqué, B.C.; Osborn, B.P.; Chambers, C.R.; Hsieh, Y.T.; Corry, S.; Chiba, T.; Hung, R.J.; Tran, H.V.; Zimmerman, P.; Miller, D.; Conley, W.; Willson, C.G. *Advances in Resists for 157 nm Photolithography*. **27th SPIE Microlithography Symposium**, San Jose, CA, March 3-8, 2002

Trinqué, B. C.; Hung, R.J.; Chambers, C.R.; Pinnow, M.J.; Tran, H.V.; Wunderlich, J.; Hsieh, Y.T.; Thomas, B.H.; Shafer, G.; DesMarteau, D.D.; Conley, W.; Willson, C.G. *Recent Advances in Resists for 157 nm Microithography*. **45th EIPBN Conference**, Washington, D.C., May 29-June 1, 2001

References available upon request.