

**MISCIBILITY, VISCOSITY, DENSITY, AND FORMATION OF  
POLYMERS IN HIGH-PRESSURE DENSE FLUIDS**

Kun Liu

Dissertation submitted to the Faculty of  
Virginia Polytechnic Institute and State University  
in Partial Fulfillment of the Requirements for the Degree of  
Doctor of Philosophy

In  
Chemical Engineering

Dr. Erdogan Kiran (Chair)

Dr. Richey Davis

Dr. Eva Marand

Dr. Paul Deck

Dr. Timothy Long

Nov 15, 2007

Blacksburg, VA

**Keywords:** Viscosity, Blending, Polymerization, Poly ( $\epsilon$ -caprolactone), Carbon Dioxide