

Corey J. Moore

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Education:

Massachusetts Institute of Technology

Ph.D. candidate in Chemical Engineering: Fall 2002 – present

Thesis: “3D Microfabricated Liver Chip: A New *In Vitro* Tool for Toxicology”

Thesis Advisor: Dr. Linda G. Griffith

Virginia Polytechnic Institute and State University

Bachelor of Science in Chemical Engineering, summa cum laude; Minor in Chemistry: May 2002

Research Experience:

E.I. du Pont de Nemours and Company, Wilmington, DE

GEM Fellowship Internship: Summer 2002

Chemical Science and Engineering Central Research Division of Experimental Station

Experimentation improving physical properties of Kevlar®

Rapid Value Assessment analyses for new Kevlar® markets

Developing novel puncture-resistant polymers

Advisor: Dr. Deborah Massouda

Nanofabrication Undergraduate Research: Summer 2001, Fall 2001, Spring 2002

Experimentation with low-pressure evaporation of gold particles onto organic monolayer-modified mica and silica surfaces

Use of Atomic Force Microscopy to evaluate surface morphology of gold

Programmer of Matlab® for image analysis of Atomic Force Microscopy data

Formation of monolayers on mica and silica with varying degrees of gold affinity

Optimizer of reactions for ethoxy silanes on mica and silica surfaces

Developer of protocols for silica surface modification with water plasma

Studied mechanisms of surface diffusion of gold on mica and silica

Advisor: Dr. William A. Ducker, Virginia Tech Department of Chemistry

Chemical Engineering Undergraduate Research: Spring 2001

Application of water-pinch technology for water reuse and wastewater minimization for the Honeywell plant located in Hopewell, VA

Creator of databases for process flow diagrams

Developed novel methods for plant water conservation

Advisor: Dr. Y. A. Liu, Virginia Tech Department of Chemical Engineering

E.I. du Pont de Nemours and Company, Parkersburg, West Virginia

Co-op Assignment: Fall 1999, Summer 2000, Fall 2000

Zytel® R&D Division of Washington Works plant

Research & Development of alcohol-soluble nylon terpolymer coatings on fiber threads

Designer and overseer of pilot-scale research apparatus

Research & Development of water-soluble nylons

Advisor: Dr. Rolando U. Pagilagan

U.S. Army Research at Fort Belvoir in Fort Belvoir, VA

Advanced Development Countermining Research Division: Summer 1999

Designer of experiments for airborne landmine detection

Reviewer and organizer of classified military data

Programmer of MatLab® to quantify and evaluate experimental military data

Statistical analyzer of classified military data

Honors:

MIT Lemelson Engineering Fellow
MIT John C. Sluder Fellow
National Consortium for Graduate Degrees for Minorities in Engineering and Science Fellow
Honored as top chemical microengineer at Virginia Tech: Fall 2001
Virginia Tech Chemical Engineering R. H. Bogle Scholar
Virginia Tech General Electric Scholar
Virginia Tech College of Engineering Pulley-Louden Scholar
Virginia Tech College of Engineering Seay Scholar
Virginia Tech Pratt Engineering Scholar
Virginia Tech Marshall Hahn Engineering Scholar
Virginia Tech Prince William County Alumni Scholar
Virginia Tech ASPIRE Scholar
Dean's List: Fall 1997 – Spring 2002
National LEAD program participant at the University of Minnesota: 1996