

**Name:** Dr. Robert T. Patterson

**Profile:**

- Over nine years experience teaching undergraduate courses in physical science, General and Organic Chemistries.
- Coauthored and coordinated several multidisciplinary proposals to the NSF and NIH agencies.
- Over twelve years synthesis experience that includes synthesis and characterization of a wide variety of heterocyclic and hydrocarbon compounds.
- Practical experiences with technical support for both sales and manufacturing.
- Over eleven years of experience with chemical processes and product development with expertise in the synthesis and production of specialty EPM, EPDM, NBR, specialty termonomers and also acrylate derived polymers.

**Professional Experience:**

- Conducted research in the area of RAFT (reversible addition-fragmentation chain transfer) polymerization.
- Synthesized laboratory quantities of novel heterocyclic compounds for propellant applications in support of Navy research grants.
- Over eight years experience teaching Organic and General chemistry to undergraduates at three different universities.
- Designed the experiments and scrounged the equipment necessary to run a second semester Organic Chemistry laboratory course for chemistry majors.
- Coauthored several proposals that were submitted to the NIH, and the NSF.
- Wrote a technical brochure that Ferro's Grant Chemical Division continues to use as a sales tool.
- Drafted standard operating procedures, product qualification documents and supervised the actual product qualification for various formulation products.
- Produced 34mTons of a new solvent based on chemistry I developed.
- Saved ½ man-year in production cost for an established product by providing a new GC based analytical method that replaced an older HPLC based method.
- Developed extruder based methods to assess the impact of changes in manufacturing on the processing ability of oil additive polymers.

### Work History:

2013-2015 Lecturer at University of Alaska SE-Sitka, AK  
2009-2010 **Senior Lecturer** at Centenary College-Shreveport, LA  
2007-2008 **Technical Writer** at Abbottsfield Industrial Training  
2002-2007 **Adjunct Professor** at The University of Southern Mississippi-Hattiesburg, MS.  
2001-2002 **Adjunct Professor** at William Carey College-Gulfport, Gulfport, MS  
1999-2000 **Lead Chemist** at Grant Chemical-Ferro Corporation.  
1997-1999 **Technical Writer** for Tech 2000, under contract to Grant Chemical-Ferro Corporation.  
1996-1997 **Instructor and Industrial Liaison**, During 1994 and again 1996-1998, at Louisiana State University, Baton Rouge, LA.  
1994-1995 **Technical Writer** for Olsten Temporary Services, Baton Rouge, LA.  
1988-1994 **Senior Chemist** at DSM-Copolymer, Baton Rouge, LA.  
1985-1988 **Post Doctoral Chemist** at the University of New Orleans, New Orleans, LA  
1982-1985 **Senior Chemist** at Aerojet Strategic Propulsion, Sacramento, Ca  
1980-1981 **Postdoctoral Fellow** at the Naval Weapons Center- China Lake, China Lake, Ca.

### Professional Preparation:

1975-1979: Louisiana State University, Baton Rouge, Louisiana; Doctorate in Physical Organic Chemistry.  
1973-1975: Ohio State University, Columbus, Ohio.  
1969-1973: Kent State University, Kent, Ohio; Bachelor of Science in Chemistry.

### Specialized Training and Development:

1993: Texaco-Oil Additives; Copolymer-Statistics and Experimental Design; Statistical Process Control.  
1992: ACS-Macromolecular Modeling at University of Akron at Akron, Oh.  
1990: ACS-Polymer Synthesis at Virginia Tech at Blacksburg, Va.  
1988: ACS Rubber Division-Rubber Chemistry and Technology.  
1986: ACS-Chemical Engineering for Chemists  
1984: Dupont-Strategy of Experimentation.

### Publications:

1. **An Improved Interpretation of the Woodward-Hoffmann Rules.** R.T. Patterson, J. Chem. Ed. **76**(1999)1002
2. **Structure of N-(2,2-dinitro-1-methylethenyl)-2-bromo-1,1,2-trimethylpropanamine.** R.T. Patterson, J.H. Boyer and E.D. Stevens, Acta Crystallogr., Sect. C: Cryst Struct. Commun. **C45**(1989)1751
3. **Synthesis of an Azulene Lactone by an Intramolecular [6 + 4] Cycloaddition.** Y.N. Gupta, R.T. Patterson, A.Z. Bimanand and K.N. Houk, Tetrahedron Lett. (1986)295
4. **Schizophrenic Substituents: The Origin of Anomalous Substituent Effects on Cycloaddition Regioselectivities.** K.N. Houk, L.N. Domelsmith, R.W. Strozier and R.T. Patterson, J. Am. Chem. Soc., **100**(1978)6531

### Patents:

1. **Development of Hydrogenation Catalysts for NBR Polymers;** US 5,430,163; US 5,475,121, Eur. Pat. Appl. EP 467,468
2. **Development of Solid Sheared Polymer Blends;** US 5,451,630; US 5,451,636; US 5,837,773; Eur. Pat. Appl. EP 637,611