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Education

1979, Ph.D., Inorganic Chemistry, Florida State University
1976, B.S., Chemistry and Mathematics, University of Wisconsin-LaCrosse

Professional Experience

2023 - Retired

2020-2023 Chair, Department of Chemistry, University of Rhode Island

1993-2023 Professor, Department of Chemistry
University of Rhode Island

2002-2017 Chair, Department of Chemistry, University of Rhode Island

1996-2003 Co-Director, Sensors and Surface Technology Partnership for Education
and Research, University of Rhode Island

1988-1993 Associate Professor, Department of Chemistry
University of Rhode Island

1982-1988 Assistant Professor, Department of Chemistry
University of Rhode Island

1979-1982 Postdoctoral Research Associate, Department of Chemistry and Materials
Research Center, Northwestern University; Advisor: Brian M. Hoffman

1976-1979 Graduate Student, Department of Chemistry, Florida State University;
Advisor: Barry B. Garrett

Membership in Professional Societies

American Association for the Advancement of Science
American Chemical Society
Division of Inorganic Chemistry
Solid State Subdivision
Division of Polymer Science
Vice-Chair, Rhode Island Section, 1989
Chair, Rhode Island Section, 1990

Publications

More than 100 publications in peer reviewed journals including topics in solid state chemistry and physics, conducting materials, inorganic chemistry, polymer synthetic chemistry, polymer reaction chemistry, photochemistry, quantum chemical calculations, sensors, thermal analysis, surface chemistry, and IR, NMR, UV-Vis, and EPR spectroscopy.

1. "Quadrupole and Magnetic Resonance of Linear Chain RbFeCl₃ and CsFeCl₃," William B. Euler, Christopher Long, William G. Moulton, Barry B. Garrett, *J. Magn. Reson.*, **1978**, 32, 23-32.
2. "Chlorine and Rubidium Resonances in RbNiCl₃," William B. Euler, Christopher Long, William G. Moulton, Barry B. Garrett, *J. Magn. Reson.*, **1978**, 32, 33-38.
3. "Double Ordering in Magnetic Linear Chain Systems," Barry B. Garrett, William B. Euler, *Sol. State Commun.*, **1978**, 28, 505-507.
4. "Covalency from Quadrupole Coupling in ABCl₃ Systems," William B. Euler, Leonard E. Mohrmann, Jr., B. B. Garrett, *J. Magn. Reson.*, **1979**, 35, 185-192.
5. "Ground State Properties of CsCoCl₃," William B. Euler, Barry B. Garrett, *J. Phys. Chem. Solids*, **1981**, 42, 7-12.
6. "Optical Selection Rules and Magnon Assignments for the Low Temperature Magnetic Spin Structures of CsCoCl₃ and CsNiCl₃," William B. Euler, Barry B. Garrett, *J. Phys. Chem. Solids*, **1981**, 42, 13-18.
7. "Carrier Properties of Porphyrinic Molecular Metals," William B. Euler, Jens Martinsen, Laurel J. Pace, Brian M. Hoffman, James A. Ibers, *Mol. Cryst. Liq. Cryst.*, **1981**, 77, 949-960.
8. "Thermodynamics of Molecular Metal Formation: Metallophthalocyanine and Tetrathiafulvalene Iodides," William B. Euler, Mary E. Melton, Brian M. Hoffman, *J. Am. Chem. Soc.*, **1982**, 104, 5966-5971.
9. "Synthesis, Characterization, and EPR Spectral Studies of the Multi-Metal Species (Fe(MS₄)₂)³⁻ (M=Mo, W)," G. Delbert Friesen, John W. MacDonald, William E. Newton, William B. Euler, Brian M. Hoffman, *Inorg. Chem.*, **1983**, 22, 2202-2208.
10. "Double Integration and Titration of the Electron Paramagnetic Resonance Signal in the Molybdenum Iron Protein of *Azotobacter Vinlandii*," William B. Euler, Jens Martinsen, John W. MacDonald, Gerald D. Watt, Z.-C. Wang, *Biochemistry*, **1984**, 23, 3021-3024.
11. "Madelung Energy Calculations on the Highly Conducting Molecular Metal Nickel Phthalocyanine Iodide," William B. Euler, *Inorg. Chem.*, **1984**, 51, 2645-2650.
12. "Extended Hückel Calculations on Azo and Azine Analogues of Polyacetylene," William B. Euler, Charles R. Hauer, *Sol. State Commun.*, **1984**, 51, 473-476.
13. "Exact Results for EPR **g** and **A** Tensors in the **S**₁=1, 3/2, 2, 5/2, **S**₂=1/2 Spin-Coupled Systems. The Effect When **S** is Not a Good Quantum Number," William B. Euler, *Inorg. Chem.*, **1986**, 25, 1871-1875.
14. "Extended Hückel Calculations on the Pi System of Polyaniline," William B. Euler, *Sol. State Commun.*, **1986**, 57, 857-859.
15. "The Structure of 2,3-Butanedionedi-hydrazone and IR Study of Higher Polyazines: A New Class of Polymeric Conductors," Charles R. Hauer, Gregory S. King, Erica L. McCool, William B. Euler, Joseph D. Ferrara, Wiley J. Youngs, *J. Am. Chem. Soc.*, **1987**, 109, 5760-5765.
16. "Extended Hückel Calculations on Defect States in the Pi System of Polyazine," William B. Euler, *J. Phys. Chem.*, **1987**, 91, 5795-5800.
17. "Steric and Electronic Interactions Between Cofacial Metallocene Rings," Regina Arnold, Bruce M. Foxman, Myron Rosenblum, William B. Euler, *Organometallics*, **1988**, 7, 1253-1259.
18. "Infrared Spectra of Iodine Doped Polyazines," William B. Euler, *Sol. State Commun.*, **1988**, 68, 291-293.
19. "Solid State NMR on Oligomeric and Polymeric Azines," William B. Euler, James E. Roberts, *Synthetic Metals*, **1989**, 29, E545-E549.
20. "A Solid State ¹³C NMR Study of Oligomeric and Polymeric Azines," William B. Euler, James E. Roberts, *Macromolecules*, **1989**, 22, 4221-4225.
21. "The Effect of Increasing Propyl Group Substitution on Permethyl Polyazine," William B. Euler, Gregory S. King, *Macromolecules*, **1989**, 22, 4664-4666.

22. "The Synthesis, Characterization, and Iodine Doping of a Soluble Polyazine: The Propyl-Methyl Substituted Derivative," William B. Euler, *Chemistry of Materials*, **1990**, 2, 209-213.
23. "Synthesis, Structure, Infrared Spectra, and Iodine Doping of Unsubstituted Polyazines," William B. Euler, Benjamin C. Gill, *Advanced Organic Solid State Materials*, Materials Research Society Symposium Proceedings, L. Y. Chiang, P. M. Chaikin, D. O. Cowan, eds., **1990**, 173, 375-378.
24. "The Structure of Glyoxal Dihydrazone and Synthesis, Characterization, and Iodine Doping of Unsubstituted Polyazine," Benjamin Chaloner-Gill, Clair J. Cheer, James E. Roberts, William B. Euler, *Macromolecules*, **1990**, 23, 4597-4603.
25. "Preparation and Characterization of a Ni(en)₂²⁺ Complex of Permethylpolyazine," William B. Euler, *Polyhedron*, **1991**, 10, 859-865.
26. "¹³C and ¹⁵N Solid State NMR of Partially Methyl Substituted Polyazines," Benjamin Chaloner-Gill, William B. Euler, James E. Roberts, *Macromolecules*, **1991**, 24, 3074-3080.
27. "Direct Evidence of a Bipolaron Charge Carrier in Conducting Polyazines by ¹³C and ¹⁵N Solid State NMR; Detection of a Nitrenium Cation by Natural Abundance ¹⁵N Solid State NMR," Benjamin Chaloner-Gill, William B. Euler, Paul D. Mumbauer, James E. Roberts, *J. Am. Chem. Soc.*, **1991**, 113, 6831-6834.
28. "X-Ray Powder Diffraction on Oligomeric and Polymeric Permethylpolyazine," William B. Euler, Andrew Szabo, *Sol. State Commun.*, **1991**, 79, 547-549.
29. "A Comparative Theoretical Study of Hydrazine," Brian K. Schmitz, William B. Euler, *J. Molec. Struct. (Theochem)*, **1992**, 257, 227-242.
30. "Optical Spectroscopy and Photochemistry of Thin Films of Propylmethylpolyazine," Bradford C. Sherman, William B. Euler, *Electrical, Optical, and Magnetic Properties of Organic Solid State Materials*, Materials Research Society Symposium Proceedings, L. Y. Chiang, A. F. Garito, D. J. Sandman, eds., **1992**, 247, 675-679.
31. "Dimeric Ruthenium Complexes of Dicyanopyrazines: Complexes with an Unstable Mixed-Valence State," Eric C. Kesslen, William B. Euler, *Polyhedron*, **1992**, 11, 3109-3115.
32. "The Electrochemical Synthesis and Electrochromic Properties of a Conducting Polymer: Polyaniline," Bradford C. Sherman, William B. Euler, R. Ken Forcé, *J. Chem. Ed.*, **1994**, 71, A94-A96.
33. "A Computational Study of Azine, Azoethene and Diimine linkages in the Poly/oligoazine System," Brian K. Schmitz, William B. Euler, *J. Comp. Chem.*, **1994**, 15, 1163-1175.
34. "The Electronic Spectroscopy of Propylmethylpolyazine," Bradford C. Sherman, William B. Euler, *Chem. Mater.*, **1994**, 6, 899-906.
35. "The Solvent Sensitive Reaction of Phenyl Substituted Poly(iminomethylene)," Jingxian Sun, Jiun-Tang Huang, William B. Euler, William Rosen, *Proceedings of the Second International Conference on Intelligent Materials*, C. A. Rogers, G. G. Wallace, ed., Technomic Publishing Co., Lancaster, PA, **1994**, 1223-1229.
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37. "Synthesis and Characterization of Pyridine End-Capped Oligoazines," Eric C. Kesslen, William B. Euler, *Tetrahed. Lett.*, **1995**, 36, 4725-4728.
38. "Syntheses and Characterization of Poly(aminophenazines)," Ajith H. Premasiri, William B. Euler, *Polym. Mater. Sci. Eng.*, **1995**, 72, 327-328.
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41. "IR Spectroscopy of Pristine and Iodine-Doped Permethylpolyazine," William B. Euler, *Chem. Mater.*, **1996**, 8, 554-557.
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48. "The Sensors and Surface Technology Partnership for Education and Research at the University of Rhode Island," Stephen V. Letcher, William B. Euler, *ChemTech*, **1998**, 28, 10-13.
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52. "Convenient Syntheses of 2,2'-Biindole," Darrell J. Koza, William B. Euler, *Heterocyclic Communications*, **1999**, 5, 399-402.
53. "End Group Effects on the Structure and Spectroscopy of Oligoazines," William B. Euler, Meng Cheng, Chao Zhao, *Chem. Mater.*, **1999**, 11, 3702-3708.
54. "A Temperature Insensitive Smart Optical Strain Sensor," Kimberly A. Thomas, William B. Euler, Everett E. Crisman, Otto J. Gregory, *Proceedings SPIE: Smart Structures and Materials 2000: Smart Systems for Bridges, Structures, and Highways*, S. C. Liu, editor, SPIE Press, vol. 3988, **2000**, 429-439.
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56. "The Influence of Preparation Conditions on the Surface Morphology of Poly(vinylidene fluoride) Films," Marcel Benz, William B. Euler, Otto J. Gregory, *Langmuir*, **2001**, 17, 239-243.
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58. "An Electrochemical, Spectroscopic, and Theoretical Study of Poly(2,3-diaminophenazine)," Kimberly A. Thomas, William B. Euler, *J. Electroanal. Chem.*, **2001**, 501, 235-240.

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64. "Synthesis and Solution Characterization of [Ru(bpy)₂]²⁺ Modified Polyazines," Meng Cheng, William B. Euler, *Inorg. Chem.*, **2003**, 42, 5384-5391.
65. "Photoconductivity of Single Wall Carbon Nanotubes Under CW NIR Illumination," Igor A. Levitsky, William B. Euler, *Appl. Phys. Lett.*, **2003**, 83, 1857-1859.
66. "Photoconductivity of Single-Walled Carbon Nanotubes Under CW Illumination," Igor A. Levitsky, Peter T. Kanelos, William B. Euler, *IEEE_Nano 2003 Proceedings*, **2003**, vol 2, p. 619-622.
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68. "Unusual Chromic and Doping Behavior of Ether Substituted Polythiophenes," Yu Wang, William B. Euler, Brett L. Lucht, *ChemComm*, **2004**, 686-687.
69. "Suppression of Toxic Compounds Produced in the Decomposition of Lithium-Ion Battery Electrolytes," Christopher L. Champion, Wentao Li, William B. Euler, Brett L. Lucht, Boris Ravdel, Joseph F. DiCarlo, Robert Gitzendanner, K. M. Abraham, *Electrochem. Solid State Lett.*, **2004**, 7, A194-A197.
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71. "Observation of Two-Step Thermo-chromism in Poly(3-docosylthiophene): DSC and Reflection Spectroscopy," Yu Wang, Nadia Archambault, Adrienne Marold, Lucy Weng, Brett L. Lucht, William B. Euler, *Macromolecules*, **2004**, 37, 5415-5422.
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74. "Hybrid Solar Cells Based on Organic Material Embedded Into Porous Silicon," Natalya Tokranova, Igor Levitsky, Bai Xu, James Castracane, William B. Euler, *Proc. SPIE*, **2005**, 5724, 183-190.
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76. "An Optical Device for Measuring Bending Strain to 5,000 Micro-Strain and Compatible With Optical Fiber Installations," Everett E. Crisman, John S. Derov, Gary Barchard, Otto J. Gregory, William B. Euler, *IEEE Sensors Journal*, **2005**, 5, 1321-1326.

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87. "Gas Phase Sensors for Bases Using Rhodamine B in Nafion Films," Eunhae Hwang, Igor A. Levitsky, William B. Euler, *J. Appl. Polym. Sci.*, **2010**, 116, 2425 – 2432.
88. "Two-Step Thermochromism in Poly(3-docosyloxy-4-methylthiophene): Mechanistic Similarity to Poly(3-docosylthiophene)," Dinesh Chalasani, Joshua K. Potvin, Brett L. Lucht, William B. Euler, *J. Polym. Sci. A Polym. Chem.*, **2010**, 48, 4370 – 4373.
89. "Kinetics of Photoactuation in Single Wall Carbon Nanotube – Nafion Bilayer Composite," Elana A. Viola, Igor A. Levitsky, William B. Euler, *J. Phys. Chem. C*, **2010**, 114, 20258 – 20266.
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91. "Achieving High Mid-IR Bolometric Responsivity for Anisotropic Composite Materials from Carbon Nanotubes and Polymers," A. Y. Glamazda, V. A. Karachevtsev, William B. Euler, Igor A. Levitsky, *Adv. Func Mater.* **2012**, 22, 2177 – 2186.
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95. "Light Trapping to Amplify Metal Enhanced Fluorescence with Application for TNT Sensing," Meredith A. Matoian, Richard Sweetman, Emily C. Hall, Shayna Albanese, William B. Euler, *J. Fluoresc.*, **2013**, 23, 877 – 880.
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97. "Speciation of the Products of and Establishing the Role of Water in the Reaction of TNT with Hydroxide and Amines: Structure, Kinetics, and Computational Results," Christopher A. Latendresse, Syrena C. Fernandes, Sangmin You, William B. Euler, *J. Phys. Chem. A*, **2013**, 117, 11167 – 11182.
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99. "Role of Mixed Solvation and Ion Pairing in the Solution Structure of Lithium Ion Battery Electrolytes," Daniel M. Seo, Stefanie Reininger, Mary Kutcher, Kaitlin Redmond, William B. Euler, Brett Lucht, *J. Phys. Chem. C*, **2015**, 119, 14038 – 14046.
100. "Detection of Gas-Phase Explosive Analytes Using Fluorescent Spectroscopy of Thin Films of Xanthene Dyes," Hui Qi Zhang, William B. Euler, *Sens. Actuat. B: Chem.*, **2016**, 225, 553 – 562.
101. "Structural Evolution of Ultrathin Films of Rhodamine 6G on Glass," Mingyu Chapman, Matthew Mullen, Elsa Novoa-Ortega, Mona Alhasani, James F. Elman, William B. Euler, *J. Phys. Chem. C*, **2016**, 120, 8289 – 8297.
102. "The Influence of Interfacial Effects on the Photophysics of Rhodamine 6G Thin Films on a Poly(vinylidene fluoride) Surface," Matthew Mullen, William B. Euler, *Langmuir*, **2017**, 33, 2194 – 2204.
103. "A Comparison of SERS and MEF of Rhodamine 6G on a Gold Substrate," Elizabeth Kohr, Buddini I. Karawdeniya, Jason R. Dwyer, Anju Gupta, William B. Euler, *Phys. Chem. Chem. Phys.*, **2017**, 19, 27074 – 27080.
104. "The Influence of Zn²⁺-doped PVDF on the Fluorescent Properties of Rhodamine 6G," Mona Alhasani, Anju Gupta, William B. Euler, *J. Luminesc.*, **2018**, 196, 116 – 125.
105. "Rhodamine 6G Structural Changes in Water/Ethanol Mixed Solvent," Mingyu Chapman, William B. Euler, *J. Fluoresc.*, **2018**, 28, 1431 – 1437.
106. "Influence of Solvent and Molecular Weight in Wrinkle Formation in Spin-Cast Polystyrene Thin Films," Chunyi Tang, Matthew Mullen, William B. Euler, *AIMS Mater. Sci.*, **2020**, 7, 60 – 74.
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114. "Structural and Optical Properties of Rhodamine Dye Aqueous Solutions and Thin Films," Mara Dubnicka, William B. Euler, *J. Phys. Chem. C* **2022**, *126*, 19386.
115. "Catalytic Thermal Decomposition of NO₂ by Iron(III) Nitrate Nonahydrate Doped Poly(Vinylidene Difluoride)," Lasanthi Sumathirathne, Carson Hasselbrink, Dugan Hayes, William B. Euler, *ACS Omega* **2022**, *7*, 43839.
116. "A Mechanistic Study of Rhodamine B Piezocatalytic Decomposition Using Poly(vinylidene difluoride) and Related Polymers," Benjamin Cromwell, Mara Dubnicka, Lasanthi Sumathirathne, Angela Thach, William B. Euler, *J. Phys. Chem. C*, **2023**, *127*, 11940.

Patents

1. "Sensing System Based on a Fluorophore Array," William B. Euler, Serial No. 15/430,320, Filed February 10, 2017, patent pending.
2. "Thermochromic Indicator Materials with Controlled Reversibility," Brett L. Lucht, William B. Euler, Yu Wang, patent number 7,943,063, issued May 17, 2011.
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8. "Piezocatalysis Using Piezoelectric Polymers," William B. Euler, Benjamin Cromwell, Mara Dubnicka, Lasanthi Sumathirathne, Angela Thach, provisional patent application March, 2020, converted to full application, March, 2021.