PERRY J. PELLECHIA

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University of South Carolina
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EDUCATION

Purdue University	West Lafayette, Indiana	Ph.D.	1989	Analytical Chemistry
Saint Joseph's College	Brooklyn, New York	B.S.	1984	Chemistry

EXPERIENCE

March 1997 – Present
Director of NMR Services **University of South Carolina; Columbia, South Carolina**

- Manage NMR Facility in Department of Chemistry and Biochemistry.
- Supervise one full-time staff member and one graduate student assistant.
- Collaborate with and assist researchers in applying advanced multinuclear, multidimensional and solid-state NMR techniques.
- Train users in both basic and advanced methods.
- Teach graduate level course in principles and applications of NMR spectroscopy.
- Perform hardware and software maintenance, pulse sequence development and Linux computer administration on four high field spectrometers.

July 1990 – March 1997
NMR Instrumentation Specialist **Purdue University; West Lafayette, Indiana**

- Designed, upgraded and maintained Chemistry Department's high field NMR systems.
- Assisted in experimental design, pulse sequence development and UNIX computer administration.
- Maintained and operated more than twelve systems of various model and manufactures.

June 1989 - June 1990
Staff Chemist **Phillips Petroleum; Bartlesville, Oklahoma**

- Performed analysis of polymer (polyolefins) molecular structure using NMR spectroscopy and fractionation techniques.
- Operated and maintained two high field NMR systems.

June 1986 - May 1989
NMR Departmental Service Operator **Purdue University; West Lafayette, Indiana**

- Operated Chemistry Department's high field NMR spectrometers to solve problems for researchers throughout the department.
- Performed multi-dimensional techniques, kinetic measurements and variable temperature experiments.

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PUBLICATIONS & PATENTS

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Barber, Peter; Pellechia, Perry J.; Ploehn, Harry J.; zur Loye, H.-C. High-Dielectric Polymer Composite Materials from a Series of Mixed-Metal Phenylphosphonates, ATi(C6H5PO3)3 for Dielectric Energy Storage. *ACS Applied Materials & Interfaces* **2010**, *2(9)*, 2553-2559

Roy, Kinkini; Wang, Chun; Smith, Mark D.; Pellechia, Perry J.; Shimizu, Linda S. Alkali Metal Ions As Probes of Structure and Recognition Properties of Macrocyclic Pyridyl Urea Hosts. *Journal of Organic Chemistry* **2010**, *75(16),* 5453-5460.

Xu, Yuewen; Smith, Mark D.; Geer, Michael F.; Pellechia, Perry J.; Brown, Julius C.; Wibowo, Arief C.; Shimizu, Linda S. Thermal Reaction of a Columnar Assembled Diacetylene Macrocycle. *Journal of the American Chemical Society* **2010**, *132(15),* 5334-5335.

Knuckley, Bryan; Causey, Corey P.; Pellechia, Perry J.; Cook, Paul F.; Thompson, Paul R. Haloacetamidine-Based Inactivators of Protein Arginine Deiminase 4 (PAD4): Evidence that General Acid Catalysis Promotes Efficient Inactivation. *ChemBioChem* **2010**, *11(2)*, 161-165.

Zhu, Lei; Yempally, Veeranna; Isrow, Derek; Pellechia, Perry J.; Captain, Burjor. Selective benzylic C-H activation of solvent toluene and m-xylene by an iron-tin cluster complex: Fe2(m -SnBut2)2(CO)8. *Journal of Organometallic Chemistry* **2009**, 695(1), 1-5.

Reger, Daniel L.; Foley, Elizabeth A.; Watson, Russell P.; Pellechia, Perry J.; Smith, Mark D.; Grandjean, Fernande; Long, Gary J. Monofluoride Bridged, Binuclear Metallacycles of First Row Transition Metals Supported by Third Generation Bis(1-pyrazolyl)methane Ligands: Unusual Magnetic Properties. *Inorganic Chemistry* **2009**, *48(22),* 10658-10669.

Dyhrman, Sonya T.; Benitez-Nelson, Claudia R.; Orchard, Elizabeth D.; Haley, Sheean T.; Pellechia, Perry J.. A microbial source of phosphonates in oligotrophic marine systems. *Nature Geoscience* **2009**, *2(10),* 696-699.

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electrochemical and spectral properties. *Polyhedron* **2009**, *28(8),* 1469-1474.

Craig, Preston S.; Shaw, Timothy J.; Miller, Penney L.; Pellechia, Perry J.; Ferry, John L. Use of Multiparametric Techniques To Quantify the Effects of Naturally Occurring Ligands on the Kinetics of Fe(II) Oxidation. *Environmental Science & Technology* **2009**, *43(2),* 337-342.

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Rushton, Gregory T.; Burns, William G.; Lavin, Judi M.; Chong, Yong S.; Pellechia, Perry; Shimizu, Ken D. Determination of the rotational barrier for kinetically stable conformational isomers via NMR and 2D TLC. An introductory organic chemistry experiment. *Journal of Chemical Education* **2007**, *84(9),* 1499-1501.

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Reger, Daniel L.; Watson, Russell P.; Gardinier, James R.; Smith, Mark D.; Pellechia, Perry J.. Metallacycles of Iron, Zinc, and Cadmium Assembled by Polytopic Bis(pyrazolyl)methane Ligands and Fluoride Abstraction from BF4-. *Inorganic Chemistry* **2006**, *45(25),* 10088-10097.

Luo, Yuan; Knuckley, Bryan; Bhatia, Monica; Pellechia, Perry J.; Thompson, Paul R. Activity-Based Protein Profiling Reagents for Protein Arginine Deiminase 4 (PAD4): Synthesis and in vitro Evaluation of a Fluorescently Labeled Probe. *Journal of the American Chemical Society* **2006**, *128(45),* 14468-14469.

Dewal, Mahender B.; Lufaso, Michael W.; Hughes, Andrew D.; Samuel, Stevan A.; Pellechia, Perry; Shimizu, Linda S. Absorption Properties of a Porous Organic Crystalline Apohost Formed by a Self-Assembled Bis-Urea Macrocycle. *Chemistry of Materials* **2006**, *18(20),* 4855-4864.

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Su, Cheng-Yong; Goforth, Andrea M.; Smith, Mark D.; Pellechia, P. J.; zur Loye, Hans-Conrad. Exceptionally Stable, Hollow Tubular Metal-Organic Architectures: Synthesis, Characterization, and Solid-State Transformation Study. *Journal of the American Chemical Society* **2004**, *126(11)*, 3576-3586.

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Bryan D. Steffey, Robert W. Chesnut, Judith L. Kershner, Perry J. Pellechia, Phillip E. Fanwick and Ian P. Rothwell; Intramolecular Arene Hydrogenation by Niobium Aryloxide Compounds: Stereochemistry of Cyclohexadiene Formation. *Journal of the American Chemical Society*, **1989**, *111*, 378

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John B. Grutzner and Perry J. Pellechia, Vortex Stabilized Electrophoretic Separation Apparatus. United States Patent 4,900,421l February 13, 1990

CONFERENCE PAPERS & POSTERS

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Frey, Rebecca L.; Pellechia, Perry J.; Decho, Alan W.; Ferry, John L. Effects of pH, temperature, and salinity on microbial communication: Speciation of autoinducer-2 in the aquatic environment. 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010

Reger, Daniel L.; Elgin, J. Derek; Semeniuc, Radu F.; Pellechia, Perry J.; Smith, Mark D. Metal complexes of bis(pyrazolyl)methane-based ligands incorporating a strong p-stacking functionality, 232nd ACS National Meeting, San Francisco, California, Sept. 10-14, 2006

Perry J Pellechia; Jinxin Gao; Yunlong Gu; Harry J Ploehn; Catherine J Murphy, Platinum Ion Uptake by Dendrimers: An NMR and AFM Study Poster at the Experimental NMR Conference, Asilomar, California; 2004

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Robert E. Santini, Dean V. Carlson and Perry J. Pellechia, Improving Sensitivity and Lowering Detection Limits on Unity Plus Spectrometers with the Addition of Audio Frequency Gain. Poster at the Experimental NMR Conference, Asilomar, California; 1996

Perry J. Pellechia, Dean V. Carlson and Robert E. Santini, Improving Sensitivity and Lowering Detection Limits on Unity Plus Spectrometers with the Addition of Audio Frequency Gain. Presented at the Midwest Varian Owners Conference, Akron, Ohio; 1995

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