

# DAVID M. MANUTA, PhD, FAIC

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## EXECUTIVE PROFILE

Nationally renowned *expert in the application of fundamental chemical principles to solve problems*, and President of *MANUTA CHEMICAL CONSULTING, INC. MC<sup>2</sup>*, an international concern, is often called upon as an expert witness and subject matter expert in industrial and legal investigations. Possesses an excellent blend of technical and interpersonal skills honed while working as key team member on highly complicated scientifically centered projects. Detail orientation with unique ability to explain complex concepts in terms easy to comprehend by lay persons. A goal is to share specialized knowledge with all interested parties during these times of uncertainty. Proven to be effective communicator whether making formal presentations or writing scientific papers. Sound work ethic and outstanding dedication characterized by professional and personal generosity demonstrated by efforts on behalf of community, co-workers, and others. Selected achievements include:

### CHEMIST

- Provides chemical expertise to business owners and to colleagues at federal government laboratories.
- Expertise in the application of thermodynamic principles to chemical industry processes.
- Developed laboratory methods for American Society for Testing and Materials (ASTM).
- Wrote and presented papers at national and international meetings of peers and customers on topics such as *The Chemistry of the Uranium Oxyfluorides I & II*, and *Quantitative Infrared Analysis of Hydrogen Fluoride*.

### RESEARCHER

- Developed the underlying theory for the use of "one of a kind" instrumentation (various on-line analyzers).
- Supervised the infrared spectroscopy and gas chromatography laboratory in an US uranium enrichment plant.
- Collaborated to initiate development of two methods of analyzing uranium. The two methods were approved by the American Society for Testing and Materials (ASTM) and later published in the Year 2000 edition of the Annual Book of Standards, Volume 12.01 on Nuclear Energy (I).

### INVESTIGATOR

- Obtains investigative data for attorney clients (Plaintiff and Defense) in civil and criminal cases.
- Utilizes extensive network of consulting experts and investigators in a wide range of legal cases.
- Interpret analytical data (on possible arsenic contamination) and recommend response for a municipal client.
- Principal investigator on task proposals and responsible for program direction, milestones, and funding.
- Identified causes of an industrial fire at a federally regulated facility and developed prevention plan.
- Provides scientific expertise to attorneys and fellow expert witnesses through technical reports.
- Reviewer of federal grant proposals in the physical sciences and firefighter safety.
- Had background role into the loss of the Space Shuttle *Columbia*.

### CONSULTANT

- Provides scientific consulting support to small businesses seeking federal government contracts.
- Support client in the optimizing of water and wax components of lava lamps
- Works with private businesses (e.g., government contractors and suppliers) to mediate/resolve disputes.
- Consult with small businesses on chemical and environmental issues.
- Introduced patented *trans*-fat substitute for use in baked goods and snack foods to the US Market.
- Introduced high-end line of over-the-counter skin care products to the US Market.
- Developed methodology to clean and disinfectant gas masks for use by the general public.
- Aluminum fire expert for Scientific Panel Investigating Nine Eleven (SPINE).



## PUBLICATIONS

- D. M. Manuta and A. J. Lees, "Photophysics of Metal Carbonyl Complexes. Multiple Emissions from Diimine Tetracarbonyl Complexes of Group 6B Metals in Room Temperature Solution," *Inorg.Chem.* (1983) 22, 572.
- S. Chun, D. M. Manuta and A. J. Lees, "Photophysics of Group 6B Metal Complexes," 13<sup>th</sup> Northeast Regional Meeting (NERM) of the American Chemical Society, Hartford, Connecticut, June 1983, abstract #103.
- D. M. Manuta and A. J. Lees, "Solvent and Substituent Effects on the Low-Lying Absorptions of  $M(CO)_4$  Diimine (M = Cr, Mo, W) Complexes, 13<sup>th</sup> NERM of the American Chemical Society, Hartford, Connecticut, June 1983, abstract #114.
- A. J. Lees and D. M. Manuta, "Effects of Solvent and Substituent on the Low-Lying, Excited States of  $M(CO)_4$  Diimine (M = Cr, Mo, W) Complexes, 186<sup>th</sup> National Meeting of the American Chemical Society, Washington, D. C., August 1983, abstract #216.
- D. M. Manuta and A. J. Lees, "Solvent and Substituent Effects on the Lowest Energy Excited States of  $M(CO)_4$  Diimine (M = Cr, Mo, W) Complexes", *Inorg. Chem.* (1983) 22, 3825.
- D. M. Manuta and A. J. Lees, "Wavelength and Temperature Effects on the Photochemistry of  $M(CO)_4$  Diimine (M = Cr, Mo, W) Complexes," 14<sup>th</sup> NERM of the American Chemical Society, Fairfield, Connecticut, June 1984, abstract #196.
- D. M. Manuta and A. J. Lees, "Solvent Effects on the Low-Lying Excited States of Metal Carbonyl Complexes," Biennial Inorganic Chemistry Symposium on Excited States, Toronto, Canada, June 1985.
- D. M. Manuta and A. J. Lees, "Emission and Photochemistry of  $M(CO)_4$  (diimine) (M = Cr, Mo, W) Complexes in Room Temperature Solution, " *Inorg. Chem.* (1986) 25, 1354.
- D. P. Drolet, D. M. Manuta, and A. J. Lees, "Characterization of Cu(II) Complexes of Imidazole, Benzimidazole, and Benzotriazole," 16<sup>th</sup> NERM of the American Chemical Society, Binghamton, NY, June 1986.
- D. M. Manuta and A. J. Lees, "Solvatochromism of the Metal to Ligand Charge-Transfer Transitions of Zerovalent Tungsten Carbonyl Complexes," *Inorg. Chem.* (1986) 25, 3212.
- D. M. Manuta and A. J. Lees, "An Experiment in Organometallic Photochemistry. Preparation and Reaction of 2,2'-bipyridinetetracarbonylmolybdenum (0)," *J. Chem. Educ.* (1987) 63, 637.
- D. M. Manuta, "Syllabus for External Degree and Off-Campus Programs Course in "An Introduction to Physical Science," Upper Iowa University, Fayette, Iowa 52142, 1988.
- D. P. Drolet, D. M. Manuta, and A. J. Lees, A. D. Katnani, and G. J. Coyle, "FTIR and XPS Study of Copper (II) Complexes of Imidazole and Benzimidazole," *Inorg. Chim. Acta* (1988) 146, 173.
- Quantitative Infrared Analysis of Total Refrigerant-114, *The Chemist* March/April 1999, pp. 7-12.
- An Evaluation of Commercially Available Sealers, *The Chemist* January/February 2000, pp. 37-41.
- The Chemistry of an Industrial Aluminum Fire, *The Chemist* March/April 2000, pp. 21-24.
- A Chemical/Thermodynamic Study of Aluminum Compounds, *The Chemist* September/October 2000, pp.19-24.
- Laboratory Tests of a Silicon-Containing Monomer Used to Seal Refrigerant-114 Leaks; POEF-USEC-14, May 19, 2000.

## PRESENTED PAPERS

- The Chemistry of the Uranium Oxyfluorides: Reference - POEF-TO-54; ACS National Meeting, Chicago, IL (1995).
- The Chemistry of the Uranium Oxyfluorides, II; Reference- POEF-TO-55; ACS National Meeting, Chicago, IL (1995).
- Quantitative Infrared Analysis of Hydrogen Fluoride; Reference- POEF-LMUS-76; ACS National Meeting, San Francisco, CA (1997).

**ASTM Standard Designation: C1441-99**  
**Approved July 10, 1999 Published September 1999**

‘Standard Test Method for The Analysis of Refrigerant-114, Plus Other Carbon-Containing and Fluorine-Containing Compounds in Uranium Hexafluoride via Fourier-Transform Infrared (FTIR) Spectroscopy.’

**INVITED CHEMISTRY PRESENTATIONS**

These are multi-media seminars (use of Power Point slides, posters, video tapes, etc.) summarizing recent professional work activities.

- State University of New York at Oneonta (SUCO), Oneonta, NY, November 7, 2002.
- American Institute of Chemists National Meeting, Boston, MA, November 8 and 9, 2002.
- State University of New York at Binghamton, Binghamton, NY, November 11, 2002.
- Chemical Heritage Foundation, Philadelphia, PA, June 10, 2005.
- Piketon High School Honors Science Class, Piketon, OH, April 6, 2006.
- Shawnee State University Chemistry Club, Portsmouth, OH, May 12, 2006.
- Chemical Heritage Foundation, Philadelphia, PA, May 19, 2006.
- Shawnee State University Chemistry Club, Portsmouth, OH, September 14, 2007.
- Pike County Rotary Club, Waverly, OH, January 15, 2009.
- Chemical Heritage Foundation, Philadelphia, PA, May 15, 2009
- Central Regional Meeting American Chemical Society (CERMACS), Cleveland, OH, May 22, 2009
- Shawnee State University, “Careers in Chemistry”, October 24, 2009
- Waverly-area Kiwanis Club, Waverly, OH, July 27, 2010
- Upper Iowa University, Fayette, IA, Communication Classes, August 26, 2010
- Cold War Patriots Leadership Conference, Elkridge, MD, September 13, 2010
- Shawnee State University Chemistry Club, Portsmouth, OH, April 20, 2012
- American Chemical Society National Meeting, New Orleans, LA April 9, 2013
- Marshall University Student Awards Banquet, Huntington, WV April 30, 2013
- Ohio University – Athens, Forensic Class and Chemistry Colloquia, Athens, OH October 7, 2013
- Chem Show, Jacob Javits Center, New York, NY December 11, 2013
- Chem Show, Jacob Javits Center, New York, NY November 18, 2015
- Association of Consulting Chemists & Chemical Engineers Seminar, Summit, NJ April 4, 2016

**PROFESSIONAL SOCIETY POSITIONS**

- Member at Large, Central Ohio Valley Location Section of the American Chemical Society
- President, Association of Consulting Chemists & Chemical Engineers
- President, American Institute of Chemists
- Member, Heritage Council, Chemical Heritage Foundation

**PROFESSIONAL AFFILIATIONS** (selected)

- American Association for the Advancement of Science (AAAS)
- American Chemical Society, Inorganic and Fluorine Divisions (ACS)
- Association of Consulting Chemists and Chemical Engineers, Consultant and Board Member (ACC&CE)
- American Institute of Chemists, Fellow and Board Member (AIC)
- American Society for Testing and Materials, Member (ASTM)
- Chemical and Engineering News (C&EN), Frequent Contributor of Topical Letters to the Editor
- Council of Scientific Society Presidents (CSSP)
- International Association of Arson Investigators (IAAI)
- National Fire Protection Association (NFPA)
- National Forensic Center (NFC)
- Ohio Academy of Science, Member and Strategic Planner (OAS)

**CONTRACTUAL RELATIONSHIPS** (selected)

- ThermoFisher Scientific, L.L.C. Reseller/Distributor Business Relationship
- City of Columbus (OH) Equal Business Opportunity Office
- City of San Antonio (TX) Northside Independent School District

**COMMUNITY INVOLVEMENT** (selected)

- Secretary, Big Brothers Big Sisters Association South Central Ohio
- President, Pike County (OH) Humane Society
- Member, Pike County (OH) Chamber of Commerce
- Regular blood donor, more than 8 gallons to date
- Often quoted in regional (southern OH) newspapers on environmental/scientific issues.

*MANUTA CHEMICAL CONSULTING, INC. WAS INCORPORATED IN 1998*

**DR. DAVID M. MANUTA, FAIC PRESIDENT**

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Website: <http://www.dmanuta.com>

**MISSION STATEMENT:** Application of Fundamental Chemical Principles to Solve Problems.

**VISION STATEMENT:** To Solve Problems That Aren't in Any Book.

**BUSINESS OBJECTIVE:** Have I applied my knowledge to help those who under other circumstances wouldn't be able to help themselves?

Manuta Chemical Consulting, Inc. is listed with the American Society for Testing and Materials (ASTM) Directory of Consultants and Expert Witnesses, the Association of Consulting Chemists and Chemical Engineers (ACC&CE), and the National Forensic Center (NFC).

Manuta Chemical Consulting, Inc. has been active in the following activities:

**Professional Expert Witnessing Experience**

- Plaintiff Chemical Expert in a case in Mason County (Gallipolis Ferry, WV)
- Defense Chemical Expert in an Adams County (Denver, CO area) case Defendant Acquitted
- Plaintiff Scientific Expert in a Pike County (Waverly, OH) Auto Insurance Case Settled Favorably
- Plaintiff Explosion Expert in a case in Pike County (Pikeville, KY) Settled Favorably
- Plaintiff Explosion Expert in an on-going case in Scott County (Davenport, IA)
- Plaintiff Chemical Expert in an on-going case in St. Louis, MO
- Defense Fire Expert in an on-going case in Knox County (Mount Vernon, OH) Prosecutor Dismissed Case
- Defense Fire Expert in an on-going case in Coshocton County (Coshocton, OH)
- Plaintiff Investigating Expert in an on-going case in Hocking County (Logan, OH)
- Plaintiff Chemical Expert in a case in Cuyahoga County (Pepper Pike, OH) Settled Favorably
- Defense Chemical Expert in an on-going case in Ingham County (Okemos, MI)
- Plaintiff Chemical and Fire Expert in an on-going insurance case in Knox County (Washington, ME)
- Plaintiff Chemical Expert in an exposure claim in Benton County (Hanford, WA)
- Plaintiff Chemical Expert in multiple exposure claims in Montgomery County (Miamisburg, OH)
- Plaintiff Explosion/Fire Expert in an on-going case in Rock County (Moline, IL)
- Plaintiff Chemical Exposure Expert in an on-going case in Seneca County (Tiffin, OH)
- Plaintiff Chemical Expert in an on-going case in Kanawha County (Charleston, WV)
- Plaintiff Fire Expert in a case in Franklin County (Hilliard, OH) Settled Favorably
- Plaintiff Chemical Expert in an on-going case in Montgomery County (Dayton, OH)
- Defense Explosion/Fire Expert in an on-going case in Livingston County (Howell, MI)
- Plaintiff Chemical Expert in an on-going case in Aiken County (North Augusta, SC)
- Plaintiff Chemical Expert in an on-going case in Hamilton County (Fernald, OH)

- Plaintiff Chemical Expert in on-going cases in St. Charles County (Weldon Spring, MO)
- Plaintiff Explosion Expert in an on-going case in Lancaster County (Lincoln, NE)
- Plaintiff Investigating Expert in an on-going case in Pike County (Piketon, OH)
- Defense Fire Expert in an on-going case in Van Wert County (Van Wert, OH)
- Plaintiff Explosion Expert in a case in Mingo County (Williamson, WV) **Settled Favorably**
- Defense Fire Expert in an on-going case in Cabell County (Milton, WV)
- Defense Fire Expert in an on-going case in Fulton County (Atlanta, GA)
- Defense Scientific Expert in an on-going case in Wayne County (Detroit, MI)
- Defense Chemical Expert in an on-going case in Cook County (Chicago, IL)
- Plaintiff Fire Expert in a case in Summit County (Akron, OH) **Case Settled**
- Plaintiff Investigating Expert in an on-going case in Pike County (Waverly, OH)
- Plaintiff Chemical Exposure Expert in on-going cases in Scioto County (Portsmouth, OH)
- Plaintiff Explosion Expert in an on-going civil case in Trumbull County (Girard, OH)
- Plaintiff Investigating Expert in an on-going civil case in Scioto County (Portsmouth, OH)
- Plaintiff Explosion Expert in a civil case in Butler County (Evans City, PA) **Case Settled**
- Defense Investigating Expert in a criminal case in Fairfield County (Lancaster, OH) **Settled Favorably**
- Defense Investigating Expert in a criminal case in Scioto County (Portsmouth, OH) **Case Settled**
- Plaintiff Chemical and Industrial Expert in an on-going case in Pike County (Waverly, OH)
- Plaintiff Nuclear and Chemical Expert in an on-going case in Pike County (Piketon, OH)
- Plaintiff Scientific Expert in a case in Montgomery County (Dayton, OH) **Case Settled**
- Defense Scientific Expert in a case in Harrison County (Clarksburg, WV) **Case Settled**
- Plaintiff Fire Expert in a case in Lawrence County (Ironton, OH) **Case Settled**
- Defense Explosion Expert in an on-going civil case in Kansas City, MO
- Chemical/Fire Expert in an on-going investigation in Franklin County (Columbus, OH)
- Plaintiff Chemical Expert in a case in Baltimore, MD **Case Settled**
- Plaintiff Fire Expert in an on-going case in Cabell County (Huntington, WV).
- Plaintiff Investigating Expert in an on-going civil case in Hamilton County (Cincinnati, OH)
- Plaintiff Investigating Expert in an on-going civil case in Pike County (Waverly, OH)
- Plaintiff Scientific Expert in a civil case in Pike County (Waverly, OH) **Case Settled**
- Defense Chemical Expert in an on-going criminal case in Cuyahoga County (Cleveland, OH)
- Plaintiff Chemical/Explosion Expert in case in Lucas County (Toledo, OH) **Case Settled**
- Defense Investigating Expert in a case in Pike County (Waverly, OH) **Case Settled**
- Plaintiff Fire Expert in a civil case in Pinellas County (St. Petersburg, FL). **Case Settled**
- Plaintiff Fire Expert in an Insurance Subrogation case in Yavapai County (Sedona, AZ). **Case Settled**
- Plaintiff Fire Expert in a case in Meigs County (Pomeroy, OH) **Case Settled**
- Plaintiff Chemical Expert in an on-going civil case in Nassau County (Malverne, NY).
- Plaintiff Expert in drug intoxication cases in municipal court (Chillicothe, OH). **Defendants Pled Guilty**

- Defense Chemical/Scientific Expert in a criminal case in Pike County (Waverly, OH). **Defendant Acquitted**
- Defense Scientific Expert in a civil case in Jackson County (Oak Hill, OH). **Case Settled**
- Plaintiff Chemical/Scientific Expert in illegal drug manufacturing cases in Pike County (Waverly, OH).
- Plaintiff Scientific Expert in a chemical exposure case in Maverick County (Eagle Pass, TX). **Case Settled**
- Plaintiff Scientific Expert in on-going Workers Compensation cases involving exposure to hazardous chemicals and radiation at the federal nuclear facility in Pike County (Piketon, OH).
- Plaintiff Chemical Expert in a criminal case in Guernsey County (Cambridge, OH). **Defendant Convicted**
- Defense Fire Expert in a criminal case in Lawrence County (Ironton, OH). **Case Settled**
- Plaintiff Hazardous Chemicals Expert in on-going civil cases in Franklin County (Columbus, OH) involving the alleged occupational inhalation of toxic chemicals at a steel mill.
- Plaintiff Fire/Explosion Expert in Insurance Subrogation case in Lawrence County (New Castle, PA) involving the explosion of a fireworks magazine in close proximity to a residential neighborhood. **Case Settled**
- Continued to support Plaintiff (real estate developer) in Lyon County (Yerington, NV) hearing to revoke the Special Use Permit granted to Advanced Specialty Gases (ASG). (The nitrogen trifluoride manufacturer has had multiple releases of toxic materials to the environment.) The Lyon County Board of Commissioners voted 3-2 to revoke ASG's Special Use Permit in 2001 (initial) and 2003 (sustain revocation).
- Plaintiff Chemical Sensitivity Expert in an on-going civil case in southeastern Kentucky. (Plaintiff is deceased.)
- Plaintiff Chemical Sensitivity Expert in a Workers Compensation case in Columbus, OH. **Case Settled**
- Plaintiff Explosion/Fire Expert in a Defective Product case in suburban New York City. **Case Settled**
- Plaintiff Fire Expert in an Insurance Subrogation case in Hamilton County (Cincinnati, OH). **Case Settled**
- Defense Fire Expert in Angela Garcia case (capital arson) in Cuyahoga County (Cleveland, OH). **Hung Jury**

**Professional Consulting Assignments and Affiliations**

- Consulting Chemical Expert for Thomson-Reuters Expert Witness Service in Dallas, TX
- Consulting Chemical Expert for iOcean Bio in Monument, CO
- Consulting Chemical Expert for the United Steel Workers Local 1-689 in Piketon, OH
- Consulting Chemical Expert for H<sub>2</sub>Sonics, L.L.C. of Wallingford, CT
- Consulting Chemical Expert for Atira Systems, Inc. of Turner, OR
- Consulting Chemical Expert for Stage 2 Innovations of Farmington, MI
- Consulting Chemical Expert for Third Millennium Metals of Waverly, OH
- Consulting Nuclear Expert for Toray Research Center of Tokyo, Japan
- Consulting Chemical Expert for Tellus Renewables Worldwide, Inc. of Arlington, WA
- Consulting Chemical Expert for Locker Associates of New York, NY
- Consulting Chemical Expert for F-Matic Corporation of Lehi, UT
- Consulting Chemical Expert for HydraClean of Mason, OH
- Consulting Chemical Expert for Westside Property Management Group, Inc. Los Angeles, CA
- Consulting Chemical Expert for Fluke Corporation, Everett, WA

- Consulting Nuclear Expert for the European Commission – Joint Research Centre, Geel, Belgium
- Consulting Chemical and Fire Expert for SCS Engineers, Cincinnati, OH
- Reseller of Chemicals and Supplies for Fisher Scientific, LLC of Pittsburgh, PA
- Consulting Physical Scientist for MicroRecovery Solutions of Lewis Center, OH
- Consulting Chemist for Minal Intermediates, Ahmedabad – 382330, Gujarat, India
- Consultant on production and specification issues at the Paducah Gaseous Diffusion Plant in western Kentucky.
- Expert on possible arsenic contamination in soils for City of Coppell, Coppell, TX.
- Midwest Consultant in Scientific Consulting for Inter City Testing & Consulting, Corporation, Mineola, NY.
- Consulting Chemist for Aames Security Corporation, Long Beach, CA
- Chemical and Environmental Consultant for Vertical Horizons One, Inc., Newark, OH.
- Senior Consulting Expert for Boson Technology Resources, LLC, Westerville, OH.
- Consulting Scientific Expert for Clever Investigations, Inc., Jackson, OH.
- Senior Consulting Chemical, Fire, and Industrial Expert for Leading Tech Forensic, Fayette, OH.
- Expert on Industrial and Scientific Issues with Round Table Group, Inc., Chicago, IL.
- Reviewer of Federal Grant Proposals in the Physical Sciences for the Lytmos Group, LLC, Lee's Summit, MO.
- Consultant on Aluminum Ignition to Scientific Panel Investigating September Eleventh (London, ON, Canada).
- Consultant on the Replacement of *trans* Fats/Oils in Salty/Snack Foods for a Chicago, IL-based marketing firm.
- Consultant on Introducing High End OTC Skin Care Products to US Market for above Chicago, IL-based firm.
- Evaluated Solvent for Cleaning Gas Masks for a Boca Raton, FL-based manufacturer.
- Consultant on Process Improvement issues with Solidscape, Inc. Merrimack, NH.
- Evaluated Paints and Coatings for a New York, NY-based manufacturer.

#### **Invited Professional Activities**

- National Defense Science and Engineering Graduate (NDSEG) Fellowship Program in Arlington, VA
- Multiple year participant in Assistance to Firefighters Grant Program, Fire Prevention and Safety Grant (Multi-year invited proposal evaluator) for Federal Emergency Management Agency (FEMA) in Emmitsburg, MD
- Southern Ohio Fire & Arson Investigators Association 20 Hour Course (Methamphetamine Laboratory Fires)
- Southern Ohio Fire & Arson Investigators Association 20 Hour Course (Bombing Investigations and Clandestine Explosive Labs)
- Southern Ohio Fire & Arson Investigators Association 20 Hour Course (Vehicle Fire Investigation)
- Southern Ohio Fire & Arson Investigators Association 20 Hour Course (Interview Techniques, Cause & Origin)
- Southern Ohio Fire & Arson Investigators Association 20 Hour Course (Expert Testimony & Report Writing)
- Introduce AIC Gold Medal Award winner at Chemical Heritage Day in 2007-08 in Philadelphia, PA

### **Invited Professional Presentations**

- Seminar Presentation: "Dealing with a False Positive in a Drugs of Abuse Case" for the Association of Chemists & Chemical Engineers (ACC&CE) at the Grand Summit Hotel, Summit, NJ.
- Colloquium Presentation on "An Entrepreneur's Story: The Application of Fundamental Chemistry in Forensic Science" for the Chemistry Department at Ohio University – Athens in Athens, OH
- Presentation on "An Exploding Automobile Battery" to Forensic Chemistry Students at Ohio University – Athens in Athens, OH.
- Presentation on "How to Tell the Truth and Get Paid for Doing It: Being an Expert Chemical Witness" for Student Awards Banquet at Marshall University in Huntington, WV
- Presentation on "How to Tell the Truth and Get Paid for Doing It: Being an Expert Chemical Witness" for American Chemical Society National Meeting Division of Small Chemical Business in New Orleans, LA
- Presentation on "Charlie Chemistry" at Shawnee State University in Portsmouth, OH
- Presentation on "Charlie Chemistry", Waverly (Bristol Village), OH
- Presentation on "Causation and Toxicology for Uranium Workers" at Cold War Patriots Leadership Conference (Elkridge, MD)
- Presentations on "An Application of Forensic Chemistry" for Upper Iowa University students (Fayette, IA)
- Presentation on "A Forensic Chemistry Investigation" for Waverly-Area Kiwanis Club (Waverly, OH)
- Presentation on "Careers in Chemistry" at Shawnee State University in Portsmouth, OH
- Presentation on "Embarking on Your Adventure in 'Real World' Chemistry" at CERMACS (Cleveland, OH)
- Presentation on "An Application of Forensic Chemistry at Chemical Heritage Foundation (Philadelphia, PA)
- Presentation on "Applications of Chemistry in Forensic Cases" for Pike County Rotary Club (Waverly, OH)
- Presentation on "Applications of Chemistry in Forensic Cases" in Waverly (Bristol Village), OH.
- Presentation on "Applications of Chemistry in Forensic Cases" at Shawnee State Univ. in Portsmouth, OH
- Presentation on "Nuclear Fuel Cycle" for NRC at University of Maryland (Shady Grove), Rockville, MD.
- Presentation on "Chemistry of Lime in a Forensic Investigation" at CHF in Philadelphia, PA.
- Presentation on "Applications of Chemical Education in the 'Real World'" at SSU in Portsmouth, OH.
- Presentation on "Applications of Real World Science" at Piketon High School in Piketon, OH.
- Presentation on "Historical and Scientific Aspects of Global Warming", Waverly (Bristol Village), OH.
- Presentations on "Adventures in 'Real World' Chemistry" in Binghamton, NY, Boston, MA, and Oneonta, NY.
- Presentation on "Applications of Chemical Education in the 'Real World'" at CHF in Philadelphia, PA.

### **Significant Professional Industrial Consulting Experiences**

- Provide regulatory/scientific support to manufacturer/distributor of sanitary chemicals
- Write MSDS documents for chemical suppliers and waste handlers (perfluorinated ethylene ether).
- Principal investigator and consultant on unusual occurrences in the chemical industry (investigation into an industrial aluminum fire).

- Problem solver and consultant on chemical aspects of complex industrial operation (improved efficiency).
- Recommendation of proper materials for various applications in large industrial settings (e.g., roofing materials, environmentally friendly detergents, water chemicals, and floor coatings).
- Laboratory methods development and writing (e.g., approved ASTM standards). Expertise in applying thermodynamic principles to chemical industry processes (deduce the probabilities of certain chemical reactions taking place).
- Expertise in the application of electrochemistry to chemical industry processes (oxidation-reduction chemistry of transition metals and uranium).
- Expertise in applying structure and bonding principles to chemical industry processes (optimizing trapping materials).
- Interpretation of spectroscopic data to support chemical industry processes (use of on-line instrumentation for process monitoring).
- Developed underlying theory for the application of one of a kind instrumentation (various on-line analyzers).
- Active involvement in replacing ozone depleting and global warming industrial coolants.
- Recommended chemical sealant for conservation of industrial coolant.
- Knowledgeable in the chemistry of radioactive elements (e.g., technetium and uranium).
- Experienced in the safe handling of strong oxidants (including fluorine-bearing materials).
- Experienced in the use of vacuum manifold systems for handling corrosive and hazardous gases.
- Experienced in the use of electronic databases and the Internet for locating useful data.
- Experienced in working in a regulated environment (e.g., Nuclear Regulatory Commission).

**DAVID M. MANUTA, PhD, FAIC**  
**Chemistry and Fire Expert**

**RECORD OF DEPOSITION AND TRIAL TESTIMONIES**

<u>Date</u>	<u>Caption</u>	<u>Court</u>	<u>Case#</u>
02/26/02	Donald Owens vs. The Clorox Company and The Kroger Company (Deposition)	Bell Circuit Court Commonwealth of Kentucky	00-CI-00089
07/22/04	State of Ohio v. Kenneth W. Moore (Trial)	Court of Common Pleas Pike County, Ohio	5-CR-95
12/08/04	Martin Contreras et al. vs. Union Pacific Railroad Company et al. (Deposition)	365 <sup>th</sup> Judicial District of Maverick County, Texas	02-04-18203-MCV
06/23/06	Allstate/Fisher et al. v. Duckback Products, Inc., Lumbermen's of Washington, Inc. et al. (Deposition)	Superior Court of Arizona, County of Yavapai	2004-0467
09/08/06	Allstate/Fisher et al. v. Duckback Products, Inc., Lumbermen's of Washington, Inc. et al. (Trial)	Superior Court of Arizona, County of Yavapai	2004-0467
08/15/11	People of MI v. Charles Jones (Daubert Hearing)	State of Michigan 44 <sup>th</sup> Circuit Court County of Livingston	10-019020-FC
10/26/11	People of MI v. Charles Jones (Trial)	State of Michigan 44 <sup>th</sup> Circuit Court County of Livingston	10-019020-FC
Since 2008	U.S. Department of Labor Claims in Energy Employees Occupational Illness Compensation Program Act (EEOICPA)	Hearings in Hamilton (Cincinnati), Montgomery (Dayton) and Scioto (Portsmouth) Counties, OH	Multiple cases in support of former US DOE employees
2/6/12	Mark Gibney, et al. v. State Farm Fire & Casualty Company (Deposition)	U.S. District Court, Southern Dist. of Ohio (Eastern Division)	Civil Action No.: 2:10-CV-00708
10/28/13	Ohio S.P.C.A., Inc. v. Bd. of Commissioners of Hocking County, et al. (Deposition)	Court of Appeals of Ohio for the Fourth Appellate Judicial District	Case No.: 13AP-002

Have also provided expert testimony in EEOICPA hearings in Burlington, IA [for a claimant at the Iowa Army Ammunition Plant (radiation exposure) and in Las Vegas, NV [for a claimant at the Nevada Test Site] plus via telephone in Aiken, SC [for claimant at the Savannah River Site (chemical exposure)]. Provided expert testimony on October 2, 2015 in support of the Plaintiff in a Trade Secrets Case in a Preliminary Hearing in Harris County Civil Court in Houston, TX. [Temporary Injunction now in place against the opposing party.]