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Place/Date of Birth: Scottsdale, Arizona, USA on July 31, 1977

Education

1998 B.A., Chemistry, Macalester College, St. Paul, MN
1999 M.S., Chemistry, Northwestern University, Evanston, IL
2003 Ph.D., Chemistry, Northwestern University, Evanston, IL
 Thesis: Fundamentals and Applications of Nanoparticle Optics and Surface-Enhanced Raman Scattering

Employment

2015 – Elmore H. Northey Professor of Chemistry
2014 – Professor at the University of Minnesota, Department of Chemistry
2010 - 2014 Associate Professor at the University of Minnesota, Department of Chemistry
2007 - 2009 McKnight Land-Grant Assistant Professor at the University of Minnesota, Department of Chemistry
2005 - 2010 Assistant Professor at the University of Minnesota, Department of Chemistry and in the Graduate Faculty of Chemical Physics
2003 - 2005 NRSA Post-Doctoral Fellow at the University of North Carolina at Chapel Hill, Department of Chemistry. Advisor: R. Mark Wightman
1998 - 2003 Graduate Student and Teaching Assistant at Northwestern University, Department of Chemistry. Advisor: Richard P. Van Duyne

Awards and Recognition

2016 *Analytical Scientist's* Power List
2015 Advising and Mentoring Award from the UMN Graduate and Professional Student Assembly
 Sara Evans Faculty Woman Scholar/Leader Award
 One of the Top 100 Inspiring Women in STEM from "Insight into Diversity" magazine
2014 Taylor Award for Distinguished Research from the University of Minnesota

- Featured on *Analytical Scientist's* "Top 40 Under 40" Power List
- 2013 Kavli Foundation Emerging Leader in Chemistry Lecture
University of Minnesota "Outstanding Postdoctoral Mentor"
- 2012 Pittsburgh Conference Achievement Award
One of "Brilliant 10" chosen by *Popular Science* magazine
- 2011 Joseph Black Award from the Royal Society of Chemistry
- 2010 Alfred P. Sloan Fellow
Arthur F. Findeis Award for Achievements by a Young Analytical Scientist from the American Chemical Society Division of Analytical Chemistry
- 2009 Society for Electroanalytical Chemistry Young Investigator Award
Camille and Henry Dreyfus Teacher-Scholar Award
- 2008 NIH New Innovator
3M Nontenured Faculty Grant
- 2007 Delegate for Japan-U.S. Young Researchers Exchange on Nanotechnology
University of Minnesota McKnight Land-Grant Assistant Professor
3M Nontenured Faculty Grant
- 2006 Kinship Foundation Searle Scholar
3M Nontenured Faculty Grant
National Science Foundation CAREER Award
- 2005 Victor K. LaMer Award from the American Chemical Society Division of Colloid and Surface Science
- 2004 Ruth L. Kirschstein National Research Service Award Postdoctoral Fellowship from the National Institutes of Health
Nobel Laureate Signature Award for Graduate Education in Chemistry from the American Chemical Society
- 2003 Award for Excellence in Graduate Research from Northwestern University
Nanoscale Science and Engineering Center International Travel Grant from Northwestern University
- 2002 Kirkbright Bursary from the Association of British Spectroscopists
Presidential Fellowship from Northwestern University
Graduate Student Gold Award from the Materials Research Society

Peer-Reviewed Publication List (137), h-index = 41

137. Quantification of Free Polyelectrolytes Present in Colloidal Suspension Reveals Source of Toxic Responses for Polyelectrolyte-wrapped Gold Nanoparticles, Qiu, T.A.; Torelli, M.; Vartanian, A.; Rackstraw, N.; Buchman, J.; Jacob, L.; Murphy, C.J.; Hamers, R.J.; Haynes, C.L.; *Anal. Chem.*, accepted.

135. A Mechanistic Study of TiO₂ Nanoparticle Toxicity on *Shewanella oneidensis* MR-1 with UVA Illumination: Bacterial Growth, Riboflavin Secretion, and Gene Expression, Qiu, T.A.; Meyer, B.M.; Christenson, K.G.; Klaper, R.D.; Haynes, C.L.; *Chemosphere*, 168 1158-1168 (2017).
134. Checkpoints for Preliminary Identification of Small Molecules found Enriched in Autophagosomes and Activated Mast Cell Secretions Analyzed by Comparative UPLC/MSe, Satori, C.P.; Ramezani, M.; Koopmeiners, J.S.; Meyer, A.F.; Rodriguez-Navarro, J.A.; Kuhns, M.M.; Taylor, T.H.; Haynes, C.L.; Dalluge, J.J.; Arriaga, E.A. *Anal. Methods*, 9, 46-54 (2017).
133. Ion Mobility based Quantification of Surface Coating Dependent Binding of Serum Albumin to Superparamagnetic Iron Oxide Nanoparticles, Jeon, S.; Obberreit, D.; Van Schooneveld, G.; Gao, Z.; Bischof, J.; Haynes, C.L.; Hogan Jr., C. *ACS Appl. Mat. Inter.*, 8(37), 24482-24490 (2016).
132. Analysis of Neuropeptide-Induced Mast Cell Degranulation and Characterization of Signaling Modulation in Response To IGE Conditioning, Manning, B.; Gruba, S.; Meyer, A.F.; Haynes, C.L. *ACS Chem. Bio.*, 11(11), 3077-3083 (2016).
131. Quantifying Intra- and Extracellular Aggregation of Iron Oxide Nanoparticles and its Influence on Specific Absorption Rate, Jeon, S.; Hurley, K.R.; Bischof, J.C.; Haynes, C.L.; Hogan, C.J. *Nanoscale*, 8 16053-16064 (2016).
130. Super-Resolution Imaging for Monitoring Cytoskeleton Dynamics, Finkenstaedt-Quinn, S.; Qiu, T.A.; Shin, K.; Haynes, C.L. *Analyst*, 141, 5674-5688 (2016).
129. Quantification and Biodistribution of Iron Oxide Nanoparticles in the Primary Clearance Organs of Mice using T1 Contrast for Heating, Zhang, J.; Ring, H.L.; Hurley, K.R.; Shao, W.; Carlson, C.S.; Idiyatullin, D.; Haynes, C.L.; Bischof, J.C.; Garwood, M. *Mag. Res. in Med.*, in press, DOI: 10.1002/mrm.26394.
128. In Solution SERS Sensing using Mesoporous Silica-coated Gold Nanorods, Gao, Z.; Burrows, N.D.; Valley, N.A.; Schatz, G.C.; Murphy, C.J.; Haynes, C.L. *Analyst*, 141 5088-5095 (2016).
127. Surface-Enhanced Raman Spectroscopy Detection of Ricin B Chain in Human Blood, Campos, A.R.; Gao, Z.; Blaber, M.G.; Huang, R.; Schatz, G.C.; Van Duyne, R.P.; Haynes, C.L. *J. Phys. Chem. C*, 120(37) 20961-20969 (2016).
126. SERS Detection of Ricin B-Chain via N-Acetyl-Galactosamine Glycopolymers, Szlag, V.M.; Styles, M.; Madison, L.; Campos, A.; Wagh, B.; Sprouse, D.; Schatz, G.C.; Reineke, T.M.; Haynes, C.L. *ACS Sensors*, 1(7) 842-846 (2016).
125. Predictable Heating and Positive MRI Contrast from a Mesoporous Silica-Coated Iron Oxide Nanoparticle, Hurley, K.R.; Ring, H.L.; Etheridge, M.; Zhang, J.; Gao, Z.; Shao, Q.; Klein, N.; Szlag, V.M.; Chung, C.; Reineke, T.M.; Garwood, M.; Bischof, J.; Haynes, C.L. *Molec. Pharm.*, 13(7) 2172-2183 (2016).
124. Impact of Nanoscale Lithium Nickel Manganese Cobalt Oxide (NMC) on the Bacterium *Shewanella oneidensis* MR-1, Hang, M.; Gunsolus, I.; Wayland, H.; Melby, E.; Mensch, A.; Hurley, K.; Pedersen, J.; Haynes, C.L.; Hamers, R. *Chem. Mater.*, 28(4) 1092-1100 (2016).
123. Variations in Fusion Pore Formation in Cholesterol-Treated Platelets, Finkenstaedt-Quinn, S., Gruba, S., and Haynes, C.L. *Biophys. J.*, 110(4) 922-929 (2016).
122. Quantifying Gold Nanoparticle Concentration in a Dietary Supplement Using Smartphone Colorimetry and Google Applications, Campos, A.R., Knutson, C.M., Knutson, T.R., Mozzetti, A.R., Haynes, C.L., Penn, R.L. *J. Chem. Ed.*, 93(2) 318-321 (2016).
121. Analytical Aspects of Nanotoxicology, Gunsolus, I.L. and Haynes, C.L. *Anal. Chem.*, 88(1) 451-479 (2016).
120. Characterization of Magnetic Nanoparticles in Biological Matrices, Hurley, K., Ring, H., Kang, H., Klein, N., and Haynes, C.L. *Anal. Chem.*, 87(23) 11611-11619 (2015).

119. 2D-IR Spectroscopy of Porous Silica Nanoparticles: Measuring the Distance Sensitivity of Spectral Diffusion, Huber, C., Egger, S., Spector, I., Juelfs, A., Haynes, C.L., Massari, A. *J. Phys. Chem. C*, 119(45) 25135-25144 (2015).
118. Gene Expression Response of the Gram-negative Bacterium *Shewanella oneidensis* and the Water Flea *Daphnia magna* Exposed to Functionalized Gold Nanoparticles, Qiu, T. A., Bozich, J. S., Lohse, S. E., Vartanian, A. M., Jacob, L. M., Meyer, B. M., Gunsolus, I. L., Niemuth, N. J., Murphy, C. J., Haynes, C. L., Klaper, R. D. *ES:Nano*, 2 615-629 (2015).
117. Dynamic Silver Speciation as Studied with Fluorous-phase Ion-selective Electrodes: Effect of Natural Organic Matter on the Toxicity and Speciation of Silver, Mousavi, M.P.S., Gunsolus, I., Perez de Jesus, C.E., Lancaster, M., Hussein, K., Haynes, C.L., Buhlmann, P. *Sci. Total Environ.*, 537 453-461 (2015).
116. Lipopolysaccharide Density and Structure Governs the Extent and Distance of Nanoparticle Interaction with Actual and Model Bacterial Outer Membranes, Jacobson, K., Gunsolus, I., Kuech, T., Troiano, J., Melby, E., Lohse, S., Hu, D., Chrisler, W., Murphy, C., Orr, G., Geiger, F., Haynes, C.L., Pedersen, J.A. *ES & T*, 49(17) 10642-10650 (2015).
115. Are We There Yet? Biases in Hiring Women Faculty Candidates [editorial], Haynes, C.L. and Sweedler, *J. Anal. Chem.*, 87(14) 6989-6989 (2015).
114. Impacts of Gold Nanoparticle Charge and Ligand Type on Surface Binding and Toxicity to Gram-Negative and Gram-Positive Bacteria, Feng, Z.V., Gunsolus, I.L., Qiu, T.A., Hurley, K.R., Nyberg, L.H., Frew, H., Johnson, K.P., Vartanian, A.M., Jacob, L.M., Lohse, S.E., Torelli, M.D., Hamers, R.J., Murphy, C.J., and Haynes, C.L. *Chem. Sci.*, 6 5186-5196 (2015).
113. Recapitulation of in vivo-like Neutrophil Transendothelial Migration using a Microfluidic Platform, Wu, X., Newbold, M. and Haynes, C.L. *Analyst*, 140 5055-5064 (2015).
112. Effects of Humic and Fulvic Acids on Silver Nanoparticle Stability, Dissolution, and Toxicity, Gunsolus, I.L., Mousavi, M.P.S., Hussein, K., Buhlmann, P., and Haynes, C.L. *ES & T*, 49(13) 8078-8086 (2015).
111. Biological Responses to Engineered Nanomaterials: Needs for the Next Decade, Murphy, C.J., Vartanian, A., Geiger, F.M., Hamers, R.J., Pedersen, J., Cui, Q., Haynes, C.L., Carlson, E.E., Hernandez, R., Klaper, R., Orr, G., and Rosenzweig, Z. *ACS Central Sci.*, 1(3) 117-123 (2015).
110. Single-Cell Analysis of Mast Cell Degranulation Induced by Airway Smooth Muscle-Secreted Chemokines, Manning, B.M., Meyer, A.F., Gruba, S.M., and Haynes, C.L. *Biochim. Biophys. Acta - General Subjects*, 1850(9) 1862-1868 (2015).
109. Ultraporous Mesoporous Silica Nanoparticles, Egger, S.M., Hurley, K.R., Datt, A., Swindlehurst, G., and Haynes, C.L. *Chem. Mat.*, 27(9) 3193-3196 (2015).
108. Platelet Membrane Variations and their Effects on δ -Granule Secretion Kinetics and Aggregation Spreading among Different Species, Gruba, S.M., Koseoglu, S., Meyer, A.F., Meyer, B.M., Maurer-Jones, M.A., and Haynes, C.L. *Biochim. Biophys. Acta - Biomembranes*, 1848(7) 1609-1618 (2015).
107. Dark Field Transmission Electron Microscopy as a Tool for Identifying Inorganic Nanoparticles in Biological Matrices, Klein, N.D., Hurley, K.R., Feng, Z.V., and Haynes, C.L. *Anal. Chem.*, 87(8) 4356-4362 (2015).
106. A Fresh Look at the Crystal Violet Lab with Handheld Camera Colorimetry, Knutson, T., Knutson, C., Mozzetti, A., Campos, A., Haynes, C.L., Penn, R.L. *J. Chem. Ed.*, 92(10) 1692-1695 (2015).
105. Imaging Cytoskeleton Dynamics in Drug-treated Platelets, Finkenstaedt-Quinn, S.A., Ge, S., and Haynes, C.L. *Anal. Bioanal. Chem.*, 407(10) 2803-2809 (2015).
104. Analytical Characterization of the Role of Phospholipids in Platelet Adhesion and Secretion, Koseoglu, S., Meyer, A.F., Kim, D., Meyer, B.M., Wang, Y., Dalluge, J., Haynes, C.L. *Anal. Chem.*, 87(1) 413-421 (2015).

103. Enhancing Graduate Student Communication to General Audiences through Blogging about Nanotechnology and Sustainability, Bishop, L., Tillman, A., Geiger, F., Haynes, C.L., Klaper, R., Murphy, C.J., Orr, G., Pedersen, J., DeStefano, L., and Hamers, R. *J. Chem. Ed.*, 91(10) 1600-1605 (2014).
102. Accounting for Biological Aggregation in Heating and Imaging of Magnetic Nanoparticles, Etheridge, M.L., Hurley, K.R., Zhang, J., Jeon, S., Hogan, C., Haynes, C.L., Garwood, M., and Bischof, J.C. *Technology*, 2(3) 1-15 (2014).
101. Exploring Inflammatory Disease Drug Effects on Neutrophil Function, Wu, X., Kim, D., Young, A.T., and Haynes, C.L. *Analyst*, 139(16) 4056-4063 (2014).
100. Facile Method to Stain the Bacterial Cell Surface for Super-Resolution Fluorescence Microscopy, Gunsolus, I.L., Hu, D., Mihai, C., Lohse, S.E., Lee, C.-S., Torelli, M.D., Hamers, R.J., Murphy, C.J., Orr, G., and Haynes, C.L. *Analyst*, 139(12) 3174-3178 (2014).
99. Microfluidic-SERS Devices for One Shot Limit-of-Detection, Kim, D., Campos, A.R., Datt, A., Gao, A., Rycenga, M., Burrows, N.D., Greeneltch, N.G., Mirkin, C.A., Murphy, C.J., Van Duyne, R.P., and Haynes, C.L. *Analyst*, 139(13) 3227-3234 (2014).
98. Rapid and Sensitive in situ SERS Detection using Dielectrophoresis, Cherukulappurath, S., Lee, S., Campos, A., Haynes, C.L., and Oh, S.-H. *Chem. Mat.*, 26(7) 2445-2452 (2014).
97. Microfluidics-based in vivo Mimetic Systems for the Study of Cellular Biology, Kim, D., Wu, X., Young, A.T., and Haynes, C.L. *Acc. Chem. Res.*, 47(4) 1165-1173 (2014).
96. Time- and Concentration-Dependent Effects of Exogenous Serotonin and Inflammatory Cytokines on Mast Cell Function, Gruba, S.M., Meyer, A.F., Manning, B.M., Wang, Y., Thompson, J.W., Dalluge, J.J., and Haynes, C.L. *ACS Chem. Bio.*, 9(2) 503-509 (2014).
95. Activities for Middle School Students To Sleuth a Chemistry “Whodunit” and Investigate the Scientific Method, Meyer, A.F., Knutson, C.M., Finkenstaedt-Quinn, S. A., Gruba, S. M., Meyer, B.M., Thompson, J.W., Maurer-Jones, M.A., Halderman, S., Tillman, A.S., DeStefano, L., Haynes, C.L. *J. Chem. Ed.*, 91(3) 410-413 (2014).
94. Death and Axes': Unexpected Ca²⁺ Entry Phenologs Predict New Anti-Schistosomal Agents, Chan, J.D., Agbedanu, P.N., Zamanian, M., Gruba, S.M., Haynes, C.L., Day, T.A., Marchant, J.S. *PLoS Pathogens*, 10(2): e1003942.
93. On-Chip Evaluation of Platelet Adhesion and Aggregation upon Exposure to Mesoporous Silica Nanoparticles, Kim, D., Finkenstaedt-Quinn, S., Hurley, K., Buchman, J.T., and Haynes, C.L. *Analyst*, 139(5) 906-913 (2014).
92. On-Chip Evaluation of Neutrophil Activation and Neutrophil-Endothelial Cell Interaction during Neutrophil Chemotaxis, Kim, D. and Haynes, C.L. *Anal. Chem.*, 85(22) 10787-10796 (2013).
91. Re-Examining the Size/Charge Paradigm: Differing In Vivo Characteristics of Size and Charge-Matched Mesoporous Silica Nanoparticles, Townson, J., Lin, Y.-S., Agola, J., Carnes, E., Leong, H.S., Lewis, J., Haynes, C.L., and Brinker, C.J. *J. Am. Chem. Soc.*, 135(43), 16030-16033 (2013).
90. The Role of p38 MAPK in Neutrophil Functions: Single Cell Chemotaxis and Surface Marker Expression, Kim, D. and Haynes, C.L. *Analyst*, 138, 6826-6833 (2013).
89. Isotope-Dilution UPLC-MS/MS Determination of Cell-Secreted Bioactive Lipids, Meyer, A.F., Thompson, J.T., Wang, Y., Koseoglu, S., Dalluge, J.J., and Haynes, C.L. *Analyst*, 138(19), 5697 - 5705 (2013).
88. Impact of TiO₂ Nanoparticles on Growth, Biofilm Formation, and Flavin Secretion in *Shewanella oneidensis*, Maurer-Jones, M.A., Gunsolus, I., Meyer, B., Christenson, C., and Haynes, C.L. *Anal. Chem.*, 85(12) 5810-5818 (2013).
87. Effects of Mesoporous Silica Coating and Post-Synthetic Treatment on the Transverse Relaxivity of Iron Oxide Nanoparticles, Hurley, K., Lin, Y.-S., Zhang, J., Egger, S., Haynes, C.L. *Chem. Mat.*, 25(9) 1968-1978 (2013).

86. Characterization of Silver Ion Dissolution from Silver Nanoparticles using Fluorous-phase Ion-Selective Electrodes and Assessment of Resultant Toxicity to *Shewanella oneidensis*, Maurer-Jones, M.A., Mousavi, M.P.S., Chen, L.D, Bühlmann, P., and Haynes, C.L. *Chem. Sci.*, 4(6) 2564-2572 (2013)
85. Toxicity of Engineered Nanoparticles in the Environment, Maurer-Jones, M.A., Gunsolus, I.L., Murphy, C.J., and Haynes, C.L. *Anal. Chem.*, 85(6) 3036-3049 (2013).
84. Self-assembled Plasmonic Nanoring Cavity Arrays for SERS and LSPR Biosensing, Im, H., Bantz, K.C., Lee, S., Johnson, T.W., Haynes, C.L., and Oh, S.-H. *Adv. Mater.*, 25(19) 2678-2685 (2013).
83. Dynamin-related Protein-1 Controls Fusion Pore Dynamics during Platelet Granule Exocytosis, Koseoglu, S., Dilks, J.R., Peters, C.G., Fitch, J.L., Fadel, N.A., Jusuja, R., Italiano, J.E., Haynes, C.L., and Flaumenhaft, R. *Atheroscler., Thromb., and Vasc. Bio.*, 33 481-485 (2013).
82. Toxicity of Nanoparticles to Brine Shrimp: An Introduction to Nanotoxicity and Interdisciplinary Science, Maurer-Jones, M.A., Love, S.A., Meierhofer, S., Marquis, B.J., Liu, Z., and Haynes, C.L. *J. Chem. Ed.*, 90(4) 475-478 (2013).
81. TiO₂ Nanoparticle-Induced ROS Correlates with Modulated Immune Cell Function, Maurer-Jones, M.A., Christenson, J. R., and Haynes, C.L. *J. Nano. Res.*, 14 1291-1303 (2012).
80. Toward Correlation in In Vivo and In Vitro Nanotoxicology Studies, Maurer-Jones, M.A. and Haynes, C.L., *J. Law, Medicine, and Ethics*, 40(4) 795-801 (2012).
79. Recommendations for Nanomedicine Human Subjects Research Oversight: An Evolutionary Approach for an Emerging Field, Fatehi, L., Wolf, S. M., McCullough, J., Hall, R., Lawrenz, F., Kahn, J.P., Jones, C., Campbell, S.A., Dresser, R. S., Erdman, A. G., Haynes, C.L., Hoerr, R.A., Hogle, L.F., Keane, M.A., Khushf, G., King, N.M.P., Kokkoli, E., Marchant, G., Maynard, A.D., Philbert, M., Ramachandran, G., Siegel, R.A., and Wickline, S. *J. Law, Medicine, and Ethics*, 40(4) 716-750 (2012).
78. Neutrophil Chemotaxis within a Competing Gradient of Chemoattractants, Kim, D. and Haynes, C.L. *Anal. Chem.*, 84(14) 6070-6078 (2012).
77. The Big Picture on Nanomedicine: The State of Investigational and Approved Nanomedicine Products, Etheridge, M.L., Campbell, S.A., Erdman, A.G., Haynes, C.L., Wolf, S.M., and McCullough, *J. Nanomedicine: Nanotechnology, Biology, and Medicine*, 9(1) 1-14 (2013).
76. Examining Changes in Cellular Communication in Neuroendocrine Cells after Noble Metal Nanoparticle Exposure, Love, S.A., Liu, Z., and Haynes, C.L. *Analyst*, 137(13) 3004-3010 (2012)
75. Development of Screening Assays for Nanoparticle Toxicity Assessment in Human Blood: Preliminary Studies with Charged Au Nanoparticles, Love, S.A., Thompson, J.W., and Haynes, C.L. *Nanomed.*, 7(9) 1355-1364 (2012).
74. Plasmon-Enabled Study of Self-Assembled Alkanethiol Ordering on Roughened Ag Substrates, Bantz, K.C., Nelson, H., and Haynes, C.L. *J. Phys. Chem. C*, 116(5) 3585-3593 (2012).
73. Carbon-fiber Microelectrode Amperometry Reveals Sickle Cell-induced Inflammation and Chronic Morphine Effects on Single Mast Cells, Manning, B., Hebbel, R., Gupta, K., and Haynes, C.L., *ACS Chem. Bio.*, 7(3) 543-551 (2012).
72. Critical Considerations in the Biomedical Use of Mesoporous Silica Nanoparticles, Lin, Y.S., Hurley, K. R., and Haynes, C. L., *J. Phys. Chem. Lett.*, 3 364-374 (2012).
71. Assessing Nanoparticle Toxicity, Love, S.A., Maurer-Jones, M.A., Thompson, J., Lin, Y.-S., and Haynes, C.L. *Ann. Rev. Anal. Chem.*, 5 181-205 (2012).
70. Ultrastable, Redispersible, Small, and Highly Organo-Modified Mesoporous Silica Nanotherapeutics, Lin, Y.-S., Abadeer, N., Hurley, K. R., and Haynes, C. L., *J. Am. Chem. Soc.*, 133(50) 20444-20457 (2011).
69. On-Chip Evaluation of Shear Stress Effect on Cytotoxicity of Mesoporous Silica Nanoparticles, Kim, D., Lin, Y.-S., and Haynes, C. L., *Anal. Chem.*, 83(22) 8377-8382 (2011).

68. Quantal Regulation and Exocytosis of Platelet Dense-Body Granules, Ge, S., Woo, E., and Haynes, C. L., *Biophys. J.*, 101(10) 2351-2359 (2011).
67. Cytoskeletal F-actin, Not the Circumferential Coil of Microtubules, Regulates Platelet Dense-body Granule Secretion, Ge, S., White, J. G., and Haynes, C. L., *Platelets*, 23(4) 259-263 (2012).
66. Electroanalytical Eavesdropping on Single Cell Communications, Kim, D., Koseoglu, S., Manning, B. M., Meyer, A. F., and Haynes, C. L., *Anal. Chem.*, 83(19) 7242-7249 (2011).
65. Gb5-RGS Complexes are Gatekeepers of Hyperactivity involved in Control of Multiple Neurotransmitter Systems, Xie, K., Ge, S., Collins, V., Haynes, C. L., Renner, K., Meisel, R., Lujan, R., and Martemyanov, K., *Psychopharm*, 219 (3) 823-834 (2012).
64. Cytotoxicity of Graphene Oxide and Graphene in Human Erythrocytes and Skin Fibroblasts, Liao, K.-H., Lin, Y.-S., Macosko, C. W., and Haynes, C.L., *ACS App. Mat. Interfaces*, 3(7) 2607-2615 (2011).
63. Aptamer-based Surface-Enhanced Raman Scattering Detection of Ricin in Liquid Foods, He, L., Lamont, E., Veeregowda, B., Sreevatsan, S., Haynes, C. L., Diez-Gonzalez, F., and Labuza, T. P., *Chem. Sci.*, 2 1579-1582 (2011).
62. Cholesterol Effects on Vesicle Pools in Chromaffin Cells Revealed by Carbon-Fiber Microelectrode Amperometry, Koseoglu, S., Love, S.A., and Haynes, C. L., *Anal. Bioanal. Chem.*, 400 (9) 2963-2971 (2011).
61. Rapid Detection of Ricin in Milk using Immunomagnetic Separation Combined with Surface-Enhanced Raman Spectroscopy, He, L., Deen, B., Rodda, T., Ronningen, I., Blasius, T., Haynes, C. L., Diez-Gonzalez, F., and Labuza, T. P., *J. Food Sci.*, 76 (5) N49-N53 (2011).
60. Effect of Polymer Deposition Method on Thermoresponsive Polymer Films and Resulting Cellular Behavior, Reed, J., Love, S.A., Lucero, A., Haynes, C. L., Canavan, H., *Langmuir*, 28 (4) 2281-2287 (2012).
59. Electrochemical Measurement of Endogenous Serotonin Release from Human Blood Platelets, Ge, S., Woo, E., White, J. G., and Haynes, C. L., *Anal. Chem.*, 83 (7) 2598-2604 (2011).
58. Recent Progress in SERS Biosensing, Bantz, K., Meyer, A.F., Wittenberg, N.J., Im, H., Kurtulus, O., Lee, S., Lindquist, N., Oh, S.-H., and Haynes, C.L., *PCCP*, 13 (24) 11551-11567 (2011).
57. Rapid Detection of a Foreign Protein in Milk using Surface-Enhanced Raman Spectroscopy Coupled with Antibody-Modified Silver Dendrites, He, L., Rodda, T., Haynes, C.L., Deschaines, T., Strother, T., Diez-Gonzalez, F., and Labuza, T., *Anal. Chem.*, 83 (5) 1510-1513 (2011).
56. The Bench Scientist's Perspective on the Unique Considerations in Nanoparticle Regulation, Marquis, B. J., Maurer-Jones, M. J., Ersin, O. H., Lin, Y.-S., and Haynes, C.L., *J. Nanoparticle Res.*, 13, 1389-1400 (2011).
55. Rapid Detection of a Foreign Protein in Milk using IMS-SERS, He, L., Haynes, C.L., Diez-Gonzalez, F., and Labuza, T.P., *J. Raman Spec.*, 42 (6) 1428-1434 (2011).
54. Investigation of Noble Metal Nanoparticle Zeta-potential Effects on Single-Cell Exocytosis Function In Vitro with Carbon-Fiber Microelectrode Amperometry, Marquis, B. J., Liu, Z., Braun, K. L. and Haynes, C. L., *Analyst*, 136 (17) 3478-3486 (2011).
53. Stability of Small Mesoporous Silica Nanoparticles in Biological Media, Lin, Y.-S., Abadeer, N. and Haynes, C. L., *Chem. Comm.*, 47, 532-534 (2011).
52. Evaluating the Effects of Immunotoxicants using Carbon-Fiber Microelectrode Amperometry, Marquis, B. J. and Haynes, C. L., *Anal. Bioanal. Chem.*, 398 (7-8) 2979-2985 (2010).
51. Critical Role of Membrane Cholesterol in Exocytosis Revealed by Single Platelet Study, Ge, S., White, J. G., and Haynes, C. L., *ACS Chem. Bio.*, 5 (9) 819-828 (2010).
50. Vertically Oriented Sub-10 nm Plasmonic Nanogap Arrays, Im, H., Bantz, K. C., Lindquist, N. Haynes, C. L., and Oh, S.-H., *Nano Lett.*, 10 (6) 2231-2236 (2010).

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34. Surface-Enhanced Raman Scattering Detection and Discrimination of Polychlorinated Biphenyls, Bantz, K. C. and Haynes, C. L., *Vib. Spec.*, 50, 29-35 (2009).
33. Quantitative and Real-Time Detection of Chemical Messenger Secretion from Platelets, Ge, S., Wittenberg, N. J. and Haynes, C. L., *Biochem.*, 47, 7020-7024 (2008).
32. Surface-Enhanced Raman Scattering Substrates Fabricated using Electroless Plating on Polymer-Templated Nanostructures, Bantz, K. C. and Haynes, C. L., *Langmuir*, 24, 5862-5867 (2008).
31. Dynamic Measurement of Altered Chemical Messenger Secretion after Cellular Uptake of Nanoparticles using Carbon-Fiber Microelectrode Amperometry, Marquis, B. M., McFarland, A. D., Braun, K. L., and Haynes, C. L., *Anal. Chem.*, 80, 3431-3437 (2008).

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29. Amperometric Studies of Functional Differences between Readily Releasable and Reserve Pool Vesicles, Haynes, C. L., Siff, L. N., and Wightman, R. M., *Biochim. et Biophys. Acta*, 1773, 728-735 (2007).
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20. Synthesis, Structure, and Selected Physical Properties of CsLnMnSe₃ (Ln=Sm, Gd, Tb, Dy, Ho, Er, Tm, Yb, Y) and AYbZnQ₃ (A=Rb, Cs; Q=Se, Te), Mitchell, K., Huan, F. Q., Caspi, E. N., McFarland, A. D., Haynes, C. L., Somers, R. C., Jorgenson, J. D., Van Duyne, R. P., and Ibers, J. A., *Inorg. Chem.*, 43, 1082- 1089 (2004).
19. A Glucose Biosensor Based on Surface-Enhanced Raman Scattering: Improved Partition Layer, Temporal Stability, Reversibility, and Resistance to Serum Protein Interactions, Haynes, C. L., Yonzon, C. R., Zhang, X., Walsh, Jr., J. T., and Van Duyne, R. P., *Anal. Chem.*, 76, 78-85 (2004).
18. Dichroic Optical Properties of Extended Nanostructures Fabricated using Angle-Resolved Nanosphere Lithography, Haynes, C. L. and Van Duyne, R. P., *Nano Lett.*, 3, 939-943 (2003).
17. Synthesis, Crystal Structure, and Optical Properties of CeMn_{0.5}OSe, Ijjaali, I., Mitchell, K., Haynes, C. L., McFarland, A. D., Van Duyne, R. P., and Ibers, J. A., *J. Solid State Chem.*, 176, 170-174 (2003).
16. The CsLnMSe₃ Semiconductors (Ln=Rare-Earth Element, Y; M=Zn, Cd, Hg), Mitchell, K., Huang, F. Q., McFarland, A.D., Haynes, C. L., Somers, R. C., Van Duyne, R. P., and Ibers, J. A., *Inorg. Chem.*, 42, 4109-4116 (2003).
15. Nanoparticle Optics: The Importance of the Radiative Dipole Coupling in Two-Dimensional Nanoparticle Arrays, Haynes, C. L., McFarland, A.D., Zhao, L., Van Duyne, R. P., Schatz, G. C., Gunnarsson, L., Prikulis, J., Kasemo, B., Käll, M., *J. Phys. Chem. B*, 107, 7337-7342 (2003).
14. Synthesis, Structure, and Optical Properties of the New Lanthanum Copper Oxysulfide La₃CuO₂S₃, Ijjaali, I., Haynes, C. L., McFarland, A. D., Van Duyne, R. P., and Ibers, J. A. *J. Solid State Chem.*, 172, 257-260 (2003).
13. Synthesis and Characterization of La₄MnCu₆S₁₀, Ijjaali, I., McFarland, A. D., Haynes, C. L., Van Duyne, R. P., and Ibers, J. A. *J. Solid State Chem.*, 172, 127-131 (2003).
12. Plasmon-Sampled Surface-Enhanced Raman Excitation Spectroscopy, Haynes, C. L. and Van Duyne, R. P. *J. Phys. Chem. B*, 107, 7426-7433 (2003).

11. Toward a Glucose Biosensor Based on Surface-Enhanced Raman Scattering, Shafer-Peltier, K. E., Haynes, C. L., Glucksberg, M. R., and Van Duyne, R. P. *J. Am. Chem. Soc.*, 125, 588-593 (2003).
10. Plasmon Scanned Surface-Enhanced Raman Scattering Excitation Profiles, Haynes, C. L. and Van Duyne, R. P. *Mat. Res. Soc. Symp. Proc.*, 728, S10.7.1-S10.7.6 (2002).
9. Tuning of Optical Band Gaps: Syntheses, Structures, Magnetic, and Optical Properties of CsLnZnSe₃ (Ln = Sm, Tb, Dy, Ho, Er, Tm, Yb, and Y), Mitchell, K., Haynes, C. L., McFarland, A.D., Van Duyne, R.P., and Ibers, J.A. *Inorg. Chem.*, 41(5), 1199-1204 (2002).
8. Metal Film Over Nanosphere (MFON) Electrodes for Surface-Enhanced Raman Spectroscopy (SERS): Improvements in Surface Nanostructure Stability and Suppression of Irreversible Loss, Dick, L.A., McFarland, A.D., Haynes, C. L., and Van Duyne, R.P. , *J. Phys. Chem. B*, 106(4), 853-860 (2002).
7. Angle-Resolved Nanosphere Lithography: Manipulation of Nanoparticle Size, Shape, and Interparticle Spacing, Haynes, C. L., McFarland, A.D., Smith, M.T., Hulteen, J.C., and Van Duyne, R.P., *J. Phys. Chem. B*, 106, 1898-1902 (2002).
6. Surface-Enhanced Raman Scattering Detected Temperature Programmed Desorption: Optical Properties, Nanostructure and Stability of Silver Film Over SiO₂ Nanosphere Surfaces, Litorja, M., Haynes, C. L., Haes, A. J., Jensen, T. R., and Van Duyne, R. P., *J. Phys. Chem. B*, 105(29), 6907-6915 (2001).
5. Nanosphere Lithography: A Versatile Nanofabrication Tool for Studies of Size-Dependent Nanoparticle Optics, Haynes, C. L. and Van Duyne, R. P., *J. Phys. Chem. B*, 105(24), 5599-5611 (2001).
4. Nanosphere Lithography: Synthesis and Application of Nanoparticles with Inherently Anisotropic Structures and Surface Chemistry, Haynes, C. L., Haes, A. J., and Van Duyne, R. P., *Mat. Res. Soc. Symp. Proc.*, 635, C6.3/1-C6.3/6 (2001).
3. Nanosphere Lithography: Self-assembled Photonic and Magnetic Materials, Haes, A. J., Haynes, C. L., and Van Duyne, R. P., *Mat. Res. Soc. Symp. Proc.*, 636, D4.8/1-D4.8/6 (2001).
2. "Raman Spectroscopy," Haynes, C. L. and Van Duyne, R. P., in *Encyclopedia of Physical Science and Technology*, Third Edition, A. J. Bard, Ed., San Diego, Academic Press, 2001, Volume 13, 845-866.
1. Nanosphere Lithography: Tunable Localized Surface Plasmon Resonance Spectra of Silver Nanoparticles, Jensen, T. R., Duval Malinsky, M., Haynes, C. L., and Van Duyne, R. P., *J. Phys. Chem. B*, 104, 10549-10556 (2000).

Patents

- "Coupling Surface-Enhanced Raman Spectroscopy and Glycopolymers to Create Bio-Sensors," Haynes, C. L., Reineke, T. M., Szlag, V., Application #20150324, provisional application filed 05/14/2015.
- "Mesoporous Silica-Coated Nanoparticles," Haynes, C.L., Hurley, K., Application # 62/030,383, provisional application filed 07/29/2014.
- "Porous Silica having High Pore Volume and Methods of Making and Using the Same," Haynes, C. L., Egger, S., and Datt, A. US 2016/0193588-A1, filed 09/26/2014.
- "Surface-Enhanced Raman Nanobiosensor," Van Duyne, R. P., Glucksberg, M. R., Peltier, K. E., Haynes, C. L., Walsh, J. T., Yonzon, C. R., Shah, N. S., Lyandres, O., Stuart, D. A., Yuen, J. M., Application #: 11/364,978, Publication #: US 2009/0118605 A1, filed 03/01/2006.

Presentations

- 2016 Invited Lecture, University of Colorado, Denver, CO
- 4 Invited Lectures, Fall 2016 National American Chemical Society Meeting, Philadelphia, PA

- Keynote Lecture, 11th International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Golden, CO
- Invited Lecture, IPrime Annual Meeting, Minneapolis, MN
- Invited Lecture, The Ohio State University, Columbus, OH
- Invited Lecture, University of Arizona, Tempe, AZ
- Invited Lecture, University of Minnesota Department of Integrative Biology and Physiology, Minneapolis, MN
- 2015
- Invited Lecture, Pacificchem 2015, Honolulu, HI
- Contributed Lecture, Sustainable Nanotechnology Organization (SNO) 2015, Portland, OR
- Invited Lecture, SciX 2015, Providence, RI
- Invited Lecture, Hope College, Holland, MI
- Contributed Lecture, ACS National Meeting, Fall 2015, Boston, MA
- Invited Lecture, 3M Tech Forum, Woodbury, MN
- Invited Lecture, American Society of Mechanical Engineers 4th Annual Nanoengineering for Biology and Medicine Conference, Minneapolis, MN
- Invited Lecture, Design of Medical Devices, Minneapolis, MN
- Invited Lecture, Gustavus Adolphus College, St. Peter, MN
- Invited Lecture, University of Pittsburgh, Pittsburgh, PA
- Invited Lecture, Nanomaterials for Energy Gordon Research Conference, Santa Barbara, CA
- 2014
- Invited Lecture, IIT Madras, Chennai, India
- Invited Lecture, University of Hyderabad, Hyderabad, India
- Invited Lecture IIT Delhi, Delhi, India
- Invited Lecture, University of Washington, Seattle, WA
- Invited Lecture, "Women in Chemical Sciences", University of Washington, Seattle, WA
- Invited Lecture, SciX 2014, Reno, NV
- Invited Lecture, American Chemical Society Fall 2014 Meeting, San Francisco, CA
- Invited Lecture, Nobel Metal Nanoparticles GRC
- Invited Lecture, Society for Thermal Medicine Conference, Minneapolis, MN
- 3M/Mitsch Lectures, Hamline University, St. Paul, MN
- Welch Lectures, Concordia College, Moorhead, MN
- Invited Lecture, UMN MinneCollege, Naples, FL
- Invited Lecture, PittCon 2014, Chicago, IL
- Invited Lecture, Society for Thermal Medicine Conference, Minneapolis, MN
- 2013
- Invited Lecture, University of North Carolina, Chapel Hill
- Invited Lecture, GlaxoSmithKline, Durham, NC

Invited Lecture, University of Victoria

Invited Lecture, University of British Columbia

Invited Lecture, Simon Frasier University

Invited Lecture, Society of Analytical Chemists of Pittsburgh

Invited Lecture, Cambridge University

Invited Lecture, Plymouth University

Invited Lecture, Strathclyde University

Invited Lecture, UMN "Headliners," St. Paul, MN

Keynote Lecture, Kavli Foundation Emerging Leader in Chemistry Lecture at Spring 2013 ACS

Invited Lecture, Eli Lilly, Indianapolis, IN

Keynote Lecture, New Mexico "Nanoparticle Synthesis and Applications for Cancer Imaging and Therapy" Symposium, Albuquerque, NM

Invited Lecture, University of Minnesota

Keynote Lecture, "Nanoscience and Nanotechnology: Environmental and Health Aspects", Iowa City, IA

Invited Lecture, Macalester College

Contributed Lecture, Sustainable Nanotechnology Organization 2013 Meeting, Santa Barbara, CA

Invited Lecture, University of California, Riverside

2012 Invited Lectures (2), PittCon 2012

Invited Lecture, Bioanalytical Sensors 2012 Gordon Research Conference

Invited Lecture, SciX 2012, Kansas City, MO

Invited Lecture, Institute for Engineering in Medicine 5th Annual Symposium

Invited Lecture, American Chemical Society Fall 2012 Meeting, Philadelphia

2011 Invited Lecture, Symposium on Nanodiagnosics and Nanotherapeutics: Building Research Ethics & Oversight, University of Minnesota

Invited Lectures (2), American Chemical Society Fall 2011 Meeting, Denver

Plenary Lecture, ICAVS, Sonoma, CA

Invited Lectures (2), American Chemical Society Spring 2011 Meeting, Anaheim

Invited Participant, 2011 German-American Kavli Frontiers of Science Symposium

Invited Lecture, University of Notre Dame

Invited Lecture, Northwestern University

"Speaker of the Year" Invited Lecture, University of Cincinnati

Invited Lecture, MN ACS Featured Speaker

2010 Invited Lecture, PittCon 2010 "Reilly Award Symposium"

Invited Lecture, PittCon 2010 "Bomem-Michelson Symposium"

Invited Lecture, PittCon 2010 "Benchtop to Bedside Symposium"

Invited Lecture, Twin Cities Electrochemical Society
 Invited Lecture, Pennsylvania State University
 Invited Lecture, Governing Nanobiotechnology Conference
 Invited Lecture, University of Chicago
 Invited Lecture, Blood Center of Wisconsin
 Invited Lecture, Clemson University
 Invited Lecture, Tongji University, China
 Invited Lecture, Fudan University, China
 Invited Lecture, Shanghai Normal University, China
 Invited Lecture, University of Minnesota Pharmaceutics Department
 Plenary Lecture, FACSS 2010 "Findeis Award Symposium"
 Invited Lecture, National Institute of Standards and Technology
 Invited Lecture, EcoLab Corporation
 2009 Invited Lecture, Mayo Clinic
 Invited Lecture, University of Illinois
 Invited Lecture, University of Indiana
 Invited Lecture, University of Kansas
 Invited Lecture, University of Texas at Austin
 Invited Lecture, Georgia Tech Department of Chemistry
 Invited Lecture, University of Minnesota Department of Chemistry
 Invited Lecture, University of Minnesota Department of Genetics, Cell Biology, and Development
 Invited Lecture, University of Minnesota Chemical Biology Symposium
 Invited Lecture, "Drug Delivery" Session of Design of Medical Devices Symposium
 Invited Lecture, PittCon 2009
 Invited Lecture, University of St. Thomas
 Contributed Lecture, 4th International Conference on Nanotechnology - Occupational and Environmental Health
 Analytical Seminar, University of Minnesota
 Analytical Seminar, University of Minnesota
 2008 Invited Poster, Transatlantic Frontiers of Chemistry
 Invited Lecture, 3M
 Invited Lecture, Spring 2008 American Chemical Society National Meeting
 Pittcon 2008 Poster Session
 Biophysics 2008 Poster Session
 2007 Invited Lecture, 2007 Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) Meeting

Invited Lecture, 5th Potter's Lodge Meeting on Electrochemistry

Invited Lecture, 3rd International Symposium on Nanotechnology, Occupational and Environmental Health

Invited Lecture, Fall 2007 American Chemical Society National Meeting

Invited Lecture, Electrochemistry Gordon Conference

Biophysics 2007 Poster Session

Invited Lecture, Japan-U.S. Young Researchers Exchange Kick-off Meeting

Invited Lecture, St. Olaf College

Searle Scholar Poster Session

Invited Lecture, "Nanotox" Session of Design of Medical Devices Symposium

Invited Lecture, Japan National Institute of Materials Science

Tohoku University Poster Session

3M Non-Tenured Faculty Grant Poster Session

2006 Biophysics 2006 Poster Session

Invited Lecture, 3M Tech Forum

Invited Speaker, 3rd Annual Minnesota Nanomedicine Workshop

2005 Plenary Lecture, 79th American Chemical Society Division of Colloid and Surface Science Symposium

Invited Seminar, Northwestern University

Invited Speaker, National American Chemical Society Spring Meeting

PittCon 2005, Bioanalytical Electrochemistry Session

2004 Invited Speaker, National American Chemical Society Spring Meeting

2003 Invited Seminar, Chalmers Technical University, Göteborg, Sweden

Invited Seminar, University of Wisconsin at Madison

Invited Seminar, University of Illinois at Urbana-Champaign

Invited Seminar, University of Indiana at Bloomington

2002 Invited Seminar, University of Minnesota.

Invited Seminar, University of California at Irvine

International Conference on Raman Spectroscopy 2002

Northwestern University Physical Chemistry Seminar

Spring Materials Research Society Meeting, Symposium S

Teaching Experience

- Chemical Principles II (CHEM 1022) at the University of Minnesota, Fall 2005, enrollment = 224
- Analytical Spectroscopy (CHEM 8152) at the University of Minnesota, Fall 2006, Fall 2007, Spring 2009, Fall 2009, Fall 2010, Fall 2011, and Fall 2012 enrollment = 10, 15, 11, 7, 17, 10, and 14 respectively

- Freshman Seminar (CHEM 1905, The End of the World as We Know It) at the University of Minnesota, Fall 2006, Spring 2007, Spring 2012, Fall 2013, and Fall 2014 enrollment = 14, 9, 15, 11, and 15, respectively
- Process Analytical Chemistry (CHEM 2121) at the University of Minnesota, Spring 2010 and Spring 2011, enrollment = 164 and 156, respectively
- Chemical Principles II (CHEM 1072) at the University of Minnesota, Spring 2014 and Spring 2015, enrollment = 79 and 78, respectively
- Freshman Seminar (CHEM 1905, Ideas Worth Spreading: Digging into TED Talks) at the University of Minnesota, Fall 2015 (2 sections, enrollment = 15 and 13) and Fall 2016 (2 sections, enrollment = 15 and 14)

Selected Synergistic Activities and University Service

- 2016 Associate Head, UMN Chemistry Department
 Associate Director, Center for Sustainable Nanotechnology
 Member of Executive Board for “Energy and U”
 Member of Advisory Board for “Open Chemical Collaborative in Diversity Equity (OXIDE)”
 Member of “Nanostructural Materials and Processes” Committee in *Industrial Partnership for Research in Interfacial Materials and Engineering (IPRIME)*
 Organized 2-day Retreat for Women Faculty in the UMN College of Science and Engineering
 Performed “Energy and U” show for 14000 Children
 Organized 11th Annual “Chemistry Day” for West 7th Street Community Center
- 2015 Associate Head, UMN Chemistry Department
 Associate Director, Center for Sustainable Nanotechnology
 Member of Executive Board for “Energy and U”
 Performed “Energy and U” show for 10000 Children
 Steering Committee for Biotechnology Training Grant
 Co-Chair of UMN Women’s Faculty Cabinet
 Organized 10th Annual “Chemistry Day” for West 7th Street Community Center
- 2014 Chair, UMN Faculty Search Committee
 Associate Director, Center for Sustainable Nanotechnology
 Symposium organizer (Colloid Division) for ACS Fall 2014
 Member of Executive Board for “Energy and U”
 Performed “Energy and U” show for 10000 Children
 Steering Committee for Chemistry/Biology Interface Training Grant
 Steering Committee for Biotechnology Training Grant
 Co-Chair of UMN Women’s Faculty Cabinet
 Organized 9th Annual “Chemistry Day” for West 7th Street Community Center
 Featured speaker for UMN “MinneCollege”

Chair, UMN Chemistry Awards Committee
 2013 Steering Committee for Chemistry/Biology Interface Training Grant
 Steering Committee for Biotechnology Training Grant
 Co-Chair of UMN Women's Faculty Cabinet
 Organized 8th Annual "Chemistry Day" for West 7th Street Community Center
 Performed "Energy and U" show for 9000 Children
 Featured speaker for UMN "Headliners" Series
 Chair, UMN Chemistry Awards Committee
 Chair, UMN Analytical Chemistry Specialty Area
 2012 Appointed member of U of MN Women's Faculty Cabinet
 Faculty Judge for U MN Graduate Symposium
 Performed "Energy and U" show for 4500 Children
 Organized 7th Annual "Chemistry Day" for West 7th Street Community Center
 Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
 Chair, UMN Chemistry Awards Committee
 2011 Featured speaker for UMN Alumni "Lunch and Learn"
 Performed "Energy and U" show for 3000 Children
 Organized 6th Annual "Chemistry Day" for West 7th Street Community Center
 Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
 Chair, UMN Chemistry Awards Committee
 2010 Performed "Energy and U" Show for 1540 Children
 Organized 5th Annual "Chemistry Day" for West 7th Street Community Center
 Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
 Co-Chair, UMN Chemistry Awards Committee
 2009 Featured speaker for founding meeting of Minnesota chapter of Achievement Rewards for College Scientists (ARCS)
 Hosted Chemistry Department Ethics Discussion on "Plastic Fantastic"
 Organized 4th Annual "Chemistry Day" for West 7th Street Community Center and Centennial Elementary School
 Featured speaker for Chemical Engineering/Materials Science Women's Lunch
 Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
 Co-Chair, UMN Chemistry Awards Committee
 2008 Organized 3rd Annual "Chemistry Day" for West 7th Street Community Center
 Featured on PBS' DragonFly TV (11/29/08 air date)
 Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
 Co-Chair, UMN Chemistry Awards Committee

- 2007
- Organizer of 3-part Graduate Fellowship Writing Workshop
 - Host and organizer for 2nd Annual Chemistry Day at the W. 7th Community Center
 - Panel Member for Preparing Future Faculty Discussion on “Exploring Careers in Academia”
 - Visited Congressional Offices as American Chemical Society Representative to Discuss Science Education Standards and R&D Funding
 - Organized and Hosted PittCon Workshop on “Junior Faculty Initiating Competitive Research Programs”
 - Initiated “Bioanalytical Supergroup Meeting” with Arriaga and Bowser Groups
 - Judge for Graduate Student Research Symposium and Undergraduate Poster Session
 - Invited Speaker for UMN High School Chemistry Teachers Workshop, “Teaching Chemistry through Interdisciplinary Examples”
 - Organized 2nd Annual “Chemistry Day” for West 7th Street Community Center
 - Invited Speaker for IT “Sneak Preview”
 - Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
 - UMN Chemistry Awards Committee
- 2006
- Organized “Chemistry Day” for West 7th Street Community Center
 - Judge for Graduate Student Research Symposium and Undergraduate Poster Session
 - FOX News Appearance Promoting “Everyday Chemistry” and “National Chemistry Week” Events
 - Chair of Analytical Seminar Series
 - Organizer of UMN Chemistry Graduate Fellowship Writing Workshop
- 2005
- Co-author for Northwestern University Nanoscale Science and Engineering Center education outreach website, <http://www.discovernano.northwestern.edu/>
 - Co-interviewer and Author of 4-part Series Addressing Life Balance in Science Careers, Science Advisory Board, <http://humans.scienceboard.net/>
- 2004
- Virtual Mentor for Northwestern University's Professional Development Listserv
- 2003
- Co-author of Materials World Module on Nanoscience, Haynes, C.; McFarland, A.; Van Duyne, R.; Godwin, H. Nanoscience and Nanotechnology Module, Materials World Modules; Northwestern University: Evanston, Illinois, 2008.

Professional Affiliations

- Associate Editor, *Analytical Chemistry* (2016 – present)
- Advisory Board, *Journal of Raman Spectroscopy* (2009 – present)
- Editorial Advisory Board, *Chemical Sciences* (2010 – present)
- Editorial Board, *The Analyst* (2010 – present)
- Editorial Advisory Board, *Chemical Research in Toxicology* (2013 – present)
- Vice Editor-in-Chief, *Environmental Science: Nano* (2013 – 2015)

- Editorial Advisory Board, *Analytical Chemistry* (2013 – 2016)
- Editorial Advisory Board, *Environmental Science: Nano* (2016 – present)

- Alpha Chi Sigma, Chemistry Honor Society
- American Chemical Society
- Biophysical Society
- Iota Sigma Pi, Women in Chemistry Honor Society
- Phi Lambda Upsilon, Graduate Chemistry Honor Society
- Society for Applied Spectroscopy
- Society for Electroanalytical Chemistry
- Coblenz Society