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Professional

2021-Present Professor of Chemistry UTRGV

2022-2023 Chemistry Graduate Program Coordinator Department of Chemistry UTRGV

2019-2019 Interim Associate Dean for Research and Educational Innovation College of
Science UTRGV

2015-2021 Associate Professor of Chemistry Department of Chemistry UTRGV

2016-2017 Associate Chair of Chemistry Department of Chemistry UTRGV

2013-2017 Graduate Program Director Department of Chemistry UTRGV

2009- 2015 Assistant Professor of Chemistry Department of Chemistry UTPA (UTRGV)

2003-2009 Research Specialist/Post Doc. University of Texas El Paso Chemistry Department

2000-2003 Research Assistant/Ph.D. Candidate University of Texas El Paso Environmental
Science and Engineering

1998-2000 Teaching Assistant/Master Student University of Texas El Paso Chemistry

1993-1998 Undergraduate Student Memorial University of Newfoundland Sir Wilfred Grenfell
College (SWGEC) Environmental Science Chemistry Bachelors

Courses Taught (UTPA/UTRGV)

CHEM 1301 General Chemistry I Lecture,

CHEM 1302 General Chemistry II Lecture

CHEM 1102 General Chemistry II Laboratory

CHEM 1101 General Chemistry I Laboratory

CHEM 1307 Chemistry for Engineers Lecture

CHEM 1107 Chemistry for Engineers Laboratory

CHEM 2301 Analytical Chemistry

CHEM 2101 Analytical Chemistry Laboratory

CHEM 3101 Inorganic Chemistry Laboratory

CHEM 3301 Inorganic Chemistry

CHEM 3401 Environmental Chemistry

CHEM 3401A Environmental Chemistry Laboratory

CHEM 4307 Advance Inorganic Chemistry

CHEM 4304 Instrumental Analysis Lecture

CHEM 4104 Instrumental Analysis Laboratory

CHEM 4378 Special Topics in Chemistry Research

CHEM 4378 Special Topics in Chemistry X-Ray Techniques

CHEM 4315 Contemporary Topics in Materials Chemistry

CHEM 4202 Chemistry Problems II

CHEM 6320 Instrumental Analysis
CHEM 6350 Special Topic Analytical Chemistry
CHEM 6302 Environmental Chemistry
CHEM 6340 Special Topics Inorganic Chemistry (Bio-Inorganic Chemistry)
CHEM 6341 Advanced Inorganic Materials Chemistry
CHEM 7300 Graduate Thesis I
CHEM 7301 Graduate Thesis II
CHEM 7302 Graduate Seminar

Secondary affiliations

2007-2009 Part time instructor El Paso Community College

2013-2020 Editorial Board of the Microchemical Journal;

2020-present Editorial Board Applied Science MDPI

Funding:

2023-2028 NIH U54HG013247 UTRGV Diversity Center for Genome Research. Total:
\$10,907,503 Role Senior Personnel.

2023-2028: NIH RM1GM149403 Experimental Cellular Approaches to Genotype ×
Environment Interaction. Total: \$8,007,078 Role: Co-PI

2023-2026: NSF MRI: : MRI: Track 1 Acquisition of a TEM for Multi-disciplinary Research and
Education at University of Texas Rio Grande Valley-A Hispanic Serving Institution.
Amount: \$ 439,413: Role Senior Personnel.

2023-2025 USDA HSI: Collaborative Effort to Enhance Water Supply for Agriculture and Food
Development through Educational Training of Hispanic Professionals. Amount: \$245,020:
Role: Senior Personnel.

2022-2023 UTRGV Seed Grant: Combined effects of elevated temperature and pesticide
exposure on molecular, biochemical, and epigenetic signals in the American oyster.
Amount: \$8,900 Role: Co-PI

2018-2017 UTRGV College of Science SEED grant: Composite Inorganic and Organic Materials
for Catalytic and Energy Systems. Amount: \$25,000 Role: PI

2017-2020 Transforming Our World Strategic Plan UTRGV Provost's Office \$15,000 Role: CO-
PI

2015-2020 USDA NIFA: IFSEEN - Integrating Food Science/Engineering & Education Network:
An Educational Linkage to Collaboratively Generate Future Hispanic Food Safety/Science
Professionals and Leaders. Amount \$2.0 million Role: Senior Personnel.

2012-2019 NIH NIGMS: UTPA RISE Undergraduate Training Program. Amount: \$1.78 million
Role: PI

Publications (121, H-index 49, i10-Index 97, Citations: 10212):

1. Helia Magali Morales, Grecia Torreblanca, Arnulfo Mar, Mataz Alcoutlabi, Thomas Eubanks, Erik Plata, Jason George Parsons. Investigation of the Removal of As(III) and As(V) using synthesized ZnO Nanoparticles: effects of pH, time, Applied Sciences 2023 (Accepted)
2. JA Sanchez, A Ibrahim, L Materon, JG Parsons, M Alcoutlabi. Cover Image, Volume 140, Issue 38. Journal of Applied Polymer Science 140 (38), e52546.
3. D Sanchez, J. Parsons, M Alcoutlabi. The Effect of Thermal Treatment on the Morphology and Structure of SnO₂/TiO₂ Composite Micro-fibers. Fibers and Polymers, 1-15
4. JA Sanchez, A Ibrahim, L Materon, JG Parsons, M Alcoutlabi. Centrifugally spun PVP/ZnO composite fibers with different surfactants and their use as Antibacterial Agents. J. Appl. Poly. Sci. 2023, e54314
5. Gabriel Gonzalez, David Sanchez, Daniel Ramirez, Jason C Myers, Timothy P Lodge, Jason Parsons, Mataz Alcoutlabi. Preparation of SnO₂/TiO₂/C composite fibers and their use as binder-free anodes for lithium-ion batteries. Bulletin of Materials Science. 46 (2023) 58
6. J Parsons, M Alcoutlabi. The Application of Transition Metal Sulfide Nanomaterials and Their Composite Nanomaterials in the Electrocatalytic Reduction of CO₂: A Review. Applied Sciences 13(2023), 3023.
7. K Flores, LN Rand, C Valdes, A Castillo, JM Cantu, JG Parsons, Paul Westerhoff, Jorge L Gardea-Torresdey. Targeting Metal Impurities for the Detection and Quantification of Carbon Black Particles in Water via spICP-MS. Environmental Science & Technology 56 (2022), 13719-13727
8. James Jihoon Kang, Jason Parsons, Sampath Gunukula, Dat T. Tran. Iron and magnesium impregnation of avocado seed biochar for aqueous phosphate removal. Clean Technol. 2022, 4, 690–702. <https://doi.org/10.3390/cleantechnol4030042>
9. Kenneth Flores, Gabriel Antonio Cerrón-Calle, Carolina Valdes, Aksana Atrashkevich, Alexandria Castillo, Helia Morales, Jason G. Parsons, Sergi Garcia-SeguraSergi Garcia-

- Segura, and Jorge L. Gardea-Torresdey. Outlining Key Perspectives for the Advancement of Electrocatalytic Remediation of Nitrate from Polluted Waters. ACS EST Engg. 2022, 2, 5, 746–768.
10. MT Hasan, R Gonzalez, AA Munoz, L Materon, JG Parsons, M Alcoutlabi. Forcespun polyvinylpyrrolidone/copper and polyethylene oxide/copper composite fibers and their use as antibacterial agents. Journal of Applied Polymer Science 139 (2022), 51773.
 11. J. Ayala, D. Ramirez, E. Fletes, H. Morales, J.G. Parsons, M. Alcoutlabi. Centrifugal Spinning and Characterization of Co₃O₄ Coated Carbon Fibers. Nano-Structures & Nano-Objects. 28 (2021) 100790.
 12. Gabriel Gonzalez, Daniel Ramirez, Jason C Myers, Timothy P. Lodge, Jason Parsons, Mataz Alcoutlabi. Synthesis of SnO₂/TiO₂ micro belt-fibers from polymer composite precursors and their applications in Li-ion batteries Journal: Polymer Engineering & Science. 62 (2022) 360–372.
 13. J. M. Cantu, J. P. Valle, A. Puente, C. Valdes, K. Flores, H. M. Morales, E. Fletes, M. Alcoutlabi, E. Kotsikorou, J. G. Parsons. Copper(II) and lead(II) adsorption onto zinc sulfide nanoparticles effects of light, pH, time, temperature, and interferences. Int. J. Environ. Sci. Technol. (2021). 1-16 <https://doi.org/10.1007/s13762-021-03610-w>
 14. Jonathan Ayala, Daniel Ramirez, Jason Myers, Timothy P. Lodge, Jason Parsons, Mataz Alcoutlabi, Performance and Morphology of Centrifugally Spun Co₃O₄/C Composite Fibers for Anode Materials in Lithium-ion Batteries. J Mater Sci (2021) 56 16010–16027. <https://doi.org/10.1007/s10853-021-06285-3>
 15. Md Toukir Hasan, Ramiro Gonzalez, Mircea Chipara, Luis Materon, Jason Parsons, Mataz Alcoutlabi. Antibacterial Activities of Centrifugally spun Polyethylene oxide/Silver Composite Nanofibers. Polym Adv Technol. (2021) 32 1–12. <https://doi.org/10.1002/pat.5261>
 16. Josabeth Navarro, Jahdiel Salazar, Alexandrina Castillo, James Jihoon Kang, Jason Parsons, Chu-Lin Cheng, Engil Pereira. Compost and biochar to promote soil biological activities under sweet potatoes cultivation in a subtropical semi-arid region. Applied and Environmental Soil Science (2020) 2020 11p
 17. Sheng Yin, Chu-lin Cheng, Jason Parsons, Yaunbing Mao, Jongmin Kin, Jason Jihoon Kang. Evaluation of arsenic sorption performance using dendritic anatase and polycrystalline rutile nano-TiO₂ for environmental applications. International Journal of Environmental Science and Technology (2021) 18 2113-2124

18. Carolina Valdes; Diego Gonzalez; Kenneth Flores; Thomas Eubanks; John Valle; Carlos Hernandez; Jorge Lopez; Mataz Alcoutlabi; Jason G. Parsons. Effect of Lanthanum Doping on the reactivity of unsupported CoMoS₂ catalysts. Applied Catalysis A: General. (2021) 611 117891.
19. Jorge Lopez, Jesus Cantu, Jason Parsons, Jason Myers, Timothy P. Lodge and Mataz Alcoutlabi. Centrifugally spun TiO₂/C composite fibers prepared from TiS₂/PAN precursor fibers as binder-free anodes for LIBS. Journal of Physics and Chemistry of Solids. (2021) 149 109795
20. K. Flores, C. Valdes, D. Ramirez, T. M. Eubanks, J. Lopez, C. Hernandez, M. Alcoutlabi, J.G. Parsons. The effect of Hybrid zinc oxide/graphene oxide (ZnO/GO) nano-catalysts on the photocatalytic degradation of simazine. Chemosphere 259 (2020) 1274142. DOI: <https://doi.org/10.1016/j.chemosphere.2020.127414>
21. Frank Joseph Dirrigl, Hanna Jung, Robert Otken, Jason Parsons. Taphonomic implications of salinization on bird bone mineral composition. Archaeological and Anthropological Sciences (2020) 12 (3), 1-13.
22. Kenneth Flores, Reagan S. Turley, Carolina Valdes, Yuqing Ye, Jesus Cantu, Jose A. Hernandez-Viezcas, Jason G. Parsons, Jorge L. Gardea-Torresdey. Environmental Applications and Recent Innovations in Single particle inductively coupled plasma mass spectrometry (SP-ICP-MS). Applied Spectroscopy Reviews (2019) 1-26
23. Jesus Cantu, John Valle, Kenneth Flores, Diego Gonzalez, Carolina Valdes, Jorge Lopez, Victoria Padilla, Mataz Alcoutlabi, Jason Parsons. Investigation into the thermodynamics and kinetics of the binding of Cu²⁺ and Pb²⁺ to TiS₂ nanoparticles synthesized using a solvothermal process. J. Environ. Chem. Eng. 7 (2019) 103463.
24. Abu Musa Abdullah, Aminur Rashid Chowdhury, Yingchen Yang, Horacio Vasquez, H. Justin Moore, Jason G. Parsons, Karen Lozano, Jose J. Gutierrez, Karen S. Martirosyan, M. Jasim Uddin. Tailoring the viscosity of water and ethylene glycol based TiO₂ nanofluids. Journal of Molecular Liquids (2020) 297, 111982
25. S. Mireles, J. Parsons, T. Trad, C.-L. Cheng, J. Kang. Lead removal from aqueous solutions using biochars derived from corn stover, orange peel, and pistachio shell. International Journal of Environmental Science and Technology. 10 (2019) 5817-5826. <https://doi.org/10.1007/s13762-018-02191-5>

26. Aminur Rashid Chowdhury, Jared Jaksik, Istiak Hussain¹, Rodolfo Longoria III, Omar Faruque, Federico Cesano, Jason Parsons, M. Jasim Uddin. Multicomponent Nanostructured Materials and Interfaces for Efficient Piezoelectricity. *Nano-Structures & Nano-Objects*. 17 (2019) 148-184.
27. Virender K. Sharma, Christie M. Sayes, Binglin Guo, Suresh Pillai, Jason G. Parsons, Chuanyi Wang, BingYan, Xingmao Ma. Interactions between silver nanoparticles and other metal nanoparticles under environmentally relevant conditions: A review. *Sci. Total Environ.* 653 (2019) 1042-1051.
28. Jorge Lopez, Jahaziel Villarreal, Jesus Cantu, Jason Parsons and Mataz Alcoutlabi Metal Sulfide/Carbon Composite Fibers as Anode Materials for Lithium Ion Batteries. *ECS Trans.* 85(2018) 275-284. doi:10.1149/08513.0275ecst
29. Abigail M. Zepeda, Daisy Gonzalez, Luis Gonzalez Heredia, Karina Marquez, Cesar Perez, Erika Pena, K. Flores, C. Valdes, T.M. Eubanks, J.G. Parsons, J. Cantu. Removal of Cu²⁺ and Ni²⁺ from aqueous solution using SnO₂ nanomaterial effect of: pH, time, temperature, interfering cations. *Microchem. J.* 141 (2018) 188-196
30. H. Campos, J. Ayala, C. Valdes, J.G. Parsons, Mataz Alcoutlabi. The use of Fe₃O₄/composite fibers as anode materials in lithium ion batteries. *MOJ Poly Sci.* 2018; 2(2):44–46. DOI: 10.15406/mojps.2018.02.00045
31. Jesus Cantu, Diego F. Gonzalez, Yvette Cantu, T.M. Eubanks, J.G. Parsons. Thermodynamic and kinetic study of the removal of Cu²⁺ and Pb²⁺ ions from aqueous solution using Fe₇S₈ nanomaterial. *Microchem. J.* 140 (2018) 80-86
32. Frank J. Dirrigl Jr, Zachariah Badaoui, Carlos Tamez, C. Vitek, Jason G. Parsons. Use of the sea hare (*Aplysia fasciata*) in biomonitoring metals in a hypersaline lagoon. *Marine Pollution Bulletin* 129(2018) 681-688.
33. Jacob Sollner, D.F. Gonzalez, J.H. Leal, T.M. Eubanks, J.G. Parsons. HDS of dibenzothiophene with CoMoS₂ synthesized using elemental sulfur. *Inorganica Chimica Acta* 466 (2017) 212–218.
34. J.H. Leal, Y. Cantu, D.F. Gonzalez, J.G. Parsons. Brookite and anatase nanomaterial polymorphs of TiO₂ synthesized from TiCl₃. *Inorganic Chemistry Communications.* 84 (2017) 28-32.
35. John Valle, B. Gonzalez, John Schultz, David Salinas, Diego Gonzalez, Carolina Valdes, Jesus Cantu, Thomas Eubanks, Jason Parsons. Sorption of Cr(III) and Cr(VI) to K₂Mn₄O₉ nanomaterial a Study of the effect of pH, time, temperature and interferences. *Microchemical Journal* 133 (2017) 614-621.

36. Jose R. Peralta-Videa, Yuxiong Huang, Jason G. Parsons, Lijuan Zhao, Laura LopezMoreno, Jose A. Hernandez-Viezcas, Jorge L. Gardea-Torresdey. Plant-based green synthesis of metallic nanoparticles: scientific curiosity or a realistic alternative to chemical synthesis? *Nanotechnol. Environ. Eng.* 1:4 (2016) 1-29
37. Jesus Cantu, Louis E. Gonzalez, Jacqueline Goodship, Monica Contreras, Meera Joseph, Cameron Garza, T.M. Eubanks, J.G. Parsons. Removal of Arsenic from water using synthetic Fe₇S₈ nanoparticles *Chemical Engineering Journal* 15 (2016) 428-437
38. Carlos Tamez, Rebecca Hernandez, J.G. Parsons. Removal of Cu (II) and Pb (II) from aqueous solution using engineered iron oxide nanoparticles. *Microchemical Journal*, 2016 (125) 97-104
39. Samuel Piña Jr, Carlos Tamez, Nezhueyotl Izquierdo, Diana M. Cedillo, Jason G. Parsons, and Jose J. Gutierrez. Reduction of Nitrobenzene Derivatives Using Sodium Borohydride and Transition. *Tetrahedron Letters* 55 (2014) 5468-5470.
40. Sandra Garcia, Saima Sardar, Stephanie Maldonado, Velia Garcia, C. Tamez, J.G. Parsons. Study of As(III) and As(V) oxoanion adsorption onto single and mixed ferrite and hausmannite nanomaterials. *Microchemical Journal* 117 (2014) 52–60.
41. Yvette Cantu, Abril Remes, Alejandra Reyna, Denise Martinez, Jahaziel Villarreal, Hilda Ramos, Samantha Trevino, C. Tamez, A. Martinez, T. Eubanks, J.G. Parsons. Thermodynamics, kinetics, and activation energy studies of the sorption of chromium(III) and chromium(VI) to a Mn₃O₄ nanomaterial. *Chemical Engineering Journal* 254 (2014) 374–383
42. Jason G. Parsons, Jeffrey Hernandez, Christina M. Gonzalez, J.L. Gardea-Torresdey. Sorption of Cr(III) and Cr(VI) to high and low pressure synthetic nano-magnetite (Fe₃O₄) particles. *Chemical Engineering Journal* 254 (2014) 171–180
43. Michael P. Reilly, James C. Saca, Alina Hamilton, Rene F. Solano, Jesse R. Rivera, Wendy Whitehouse-Innis, Jason G. Parsons, Robert K. Dearth. Prepubertal exposure to arsenic(III) suppresses circulating insulin-like growth factor-1 (IGF-1) delaying sexual maturation in female rats. *Reproductive Toxicology* 44 (2014) 41–49
44. Yuanbing Mao Jason Parsons, and John S. McCloy. Magnetic properties of double perovskite La₂BMnO₆ (B ¼ Ni or Co) nanoparticles. *Nanoscale*, (2013) 3, 4720.
45. Steven Luther, Nathan Brogfeld, Jisoo Kim, J.G. Parsons, Study of the thermodynamics of chromium(III) and chromium(VI) binding to iron(II/III)oxide or magnetite or ferrite and manganese(II) iron (III) oxide or jacobsite or manganese ferrite nanoparticles. *Journal of Colloid and Interface Science* (2013), 200, 97-103.

46. Christopher W.N. Anderson, Saleem M. Bhatti, Jorge Gardea-Torresdey, and Jason Parsons. In Vivo Effect of Copper and Silver on Synthesis of Gold Nanoparticles inside Living Plants. *Sustainable Chemistry and Engineering* (2013) 1 (6), 640–648
47. Jason G. Parsons, Kenneth M. Dokken, John McClure, Jorge L. Gardea-Torresdey. FTIR, XAS, and XRD study of cadmium complexes with L-cysteine. (2013) 56, 237-242.
48. C.M. Gonzalez, J.G. Parsons, J. Hernandez, J.L. Gardea-Torresdey. X-ray absorption spectroscopy studies for the determination of adsorption binding modes of selenium oxoanions onto iron and manganese based nanomaterials. *Mater. Res. Soc. Proc.* 1480 (2012) 13-24. 10.1557/opl.2012.1613.
49. M.O. Montes, J.R. Peralta-Videa, J.G. Parsons, J.L. Gardea-Torresdey. Spectroscopic determination of the toxicity, absorption, reduction, and translocation of Cr (VI) in two Magnoliopsida species. *International Journal of Phytoremediation* (2013), 15, 1-20.
50. C.M. Gonzalez, J. Hernandez, J.G. Parsons, J.R. Peralta-Videa, J.L. Gardea-Torresdey. 2012. Sorption kinetic study of selenite and selenate onto a high and low pressure aged iron oxide nanomaterial. *Journal of Hazardous Materials* 211–212, 138-145.
51. Steven Luther, Nathan Borgfeld, Jisoo Kim, J.G. Parsons. Removal of arsenic from aqueous solution- A study of the effects of pH and interfering ions using iron oxide nanomaterials *Microchemical Journal* (2012), 101, 30-36.
52. Gandy, Y. P., A. Mamachen, A. Mamachen, J. Lieman, M. Persans, J. Parsons, E. Ibrahim, K. R. Summy, J. H. Everitt, and C. R. Little. 2011. Techniques to facilitate the acquisition of accurate spectral measurements and multispectral imagery of plant foliage under artificial lighting conditions. *Subtropical Plant Science* 63:45-53.
53. Montes, M. Mayoral, A., Deepak, F. L., Parsons, J.G., Peralta-Videa, J. R., JoseYacaman, M., Gardea-Torresdey, J. L. Anisotropic gold nanoparticles and gold plates biosynthesis using alfalfa extract. *J. Nanoparticle Res.* (2011).13(8), 3113-3121.
54. Gonzalez, Christina M.; Hernandez, Jeffrey; Parsons, Jason G.; Gardea-Torresdey, Jorge L. Adsorption of Selenite and Selenate by a High- and Low-Pressure Aged Manganese oxide nanomaterial. *Instrumentation Sci. Technol.* (2011), 39(1), 1-19.
55. Delgado, R. M., Parsons, J., Garcia, H., Corral A. A., Cruz J. G., Campos T. A., Duarte M. A., Gardea-Torresdey, J. Comparison of ICP-OES and XRF performance for Pb and As analysis in environmental soil samples from Chihuahua City, Mexico. *Physical Review & Research International* 1(2) (2011): 29-44.
56. Parsons, J.G., Lopez, M.L, Gonzalez, C., Peralta-Videa, J.R., Gardea-Torresdey, J.L. 2010. Toxicity and biotransformation of uncoated and coated nickel hydroxide nanoparticles on mesquite plants. *Environmental Toxicology and Chemistry* 29(5), (2010) 1146– 1154.

57. Tackett, R. J.; Parsons, J. G.; Machado, B. I.; Gaytan, S. M.; Murr, L. E.; Botez, C. E. Evidence of low-temperature superparamagnetism in Mn₃O₄ nanoparticle ensembles Nanotechnology (2010), (21), 365703
58. Gonzalez, C.M., Hernandez, J., Parsons, J.G., Gardea-Torresdey, J.L. Removal of selenite and selenate from aqueous solutions using a magnetic iron/manganese oxide nanomaterial. Microchemical Journal 96, (2010), 324-329.
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60. Parsons, J. G.; Luna, C.; Botez, C. E.; Elizalde, J.; Gardea-Torresdey, J. L. Microwave assisted synthesis of iron(III) oxyhydroxides/oxides characterized using transmission electron microscopy, X-ray diffraction, and X-ray absorption spectroscopy. J Phys. Chem. Solids (2009), 70(3-4), 555-560.
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62. Parsons, J. G.; Lopez, M. L.; Castillo-Michel, H.; Peralta-Videa, J. R.; Gardea-Torresdey, J. L. Arsenic speciation in biological samples using XAS and mixed oxidation state calibration standards of inorganic arsenic. Applied Spectroscopy 63 (2009), 961-970.
63. De la Rosa, G., Torres, J., Parsons, J.G., Peralta-Videa, J.R., Castillo-Michel, H., Lopez, M.L., Cruz-Jiménez, G., Gardea-Torresdey, J. L. X-ray absorption spectroscopy unveils the formation of gold nanoparticles in corn Acta Universitaria 19 (2009)76-81.
64. Castillo-Michel, Hiram A.; Hernandez, Nahum; Martinez-Martinez, Alejandro; Parsons, Jason G.; Peralta-Videa, Jose R.; Gardea-Torresdey, Jorge L. Coordination and speciation of cadmium in corn seedlings and its effects on macro- and micronutrients uptake. Plant Physiology and Biochemistry (2009), 47(7), 608-614.
65. Armendariz, Veronica; Parsons, Jason G.; Lopez, Martha L.; Peralta-Videa, Jose R.; JoseYacaman, Miguel; Gardea-Torresdey, Jorge L. The extraction of gold nanoparticles from oat and wheat biomasses using sodium citrate and cetyltrimethylammonium bromide, studied by x-ray absorption spectroscopy, high-resolution transmission electron microscopy, and UV-visible spectroscopy. Nanotechnology (2009), 20(10), 105607/1105607/8

66. Kenneth M. Dokken, Jason G. Parsons, John McClure, Jorge L. Gardea-Torresdey, Synthesis and structural analysis of copper(II) cysteine complexes *Inorganica Chimica Acta*, (2009), 362(2), 395-401
67. Lopez, Martha Laura; Peralta-Videa, Jose R.; Parsons, Jason G.; Gardea-Torresdey, Jorge L.; Duarte-Gardea, Maria. Effect of indole-3-acetic acid, kinetin, and ethylenediaminetetraacetic acid on plant growth and uptake and translocation of lead, micronutrients, and macronutrients in alfalfa plants. *International Journal of Phytoremediation* (2009), 11(2), 131-149.
68. Castillo-Michel, Hiram A.; Zuverza-Mena, Nubia; Parsons, Jason G.; Dokken, Kenneth M.; Duarte-Gardea, Maria; Peralta-Videa, Jose R.; Gardea-Torresdey, Jorge L. Accumulation, speciation, and coordination of arsenic in an inbred line and a wild type cultivar of the desert plant species *Chilopsis linearis* (Desert willow). *Phytochemistry* (Elsevier) (2009), 70(4), 540-545.
69. Parsons, J. G.; Lopez, M. L.; Peralta-Videa, J. R.; Gardea-Torresdey, J. L. Determination of arsenic(III) and arsenic(V) binding to microwave assisted hydrothermal synthetically prepared Fe_3O_4 , Mn_3O_4 , and MnFe_2O_4 nanoadsorbents. *Microchemical Journal* (2009), 91(1), 100-106.
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71. Lopez, Martha Laura; Peralta-Videa, Jose R.; Parsons, Jason G.; Duarte-Gardea, Maria; Gardea-Torresdey, Jorge L. Concentration and biotransformation of arsenic by *Prosopis* sp. grown in soil treated with chelating agents and phytohormones. *Environmental Chemistry* (2008), 5(5), 320-331.
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Book Chapters (Total 6):

1. J. G. Parsons, Helia M. Morales, E. Kotsikorou, R.K. Dearth, Rupesh Kariyat, and Mataz Alcoutlabi. Characterization of Engineering Nanomaterials (ENMs) in water, soil, and plant media. *Physicochemical Interactions of Engineered Nanoparticles and Plants: A Systemic Approach*. (2022)
2. J.G. Parsons, Mataz Alcoutlabi, R. K. Dearth. An Overview of Metal Oxide Nanoparticle Toxicity. *Springer-Nature Nanomaterial Biinteractions*. (2020)
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Presentations (total 136):

- 1.) Jason G. Parsons, Daniel Ramirez, Veronica Padillia, Ramiro Gonzalez, Mataz Alcoutlabi. Effects of Graphene Oxide on Catalytic Activities of Nano-scaled Co and Ni Promoted MoS₂ Catalysts in the HDS of Dibenzothiophene. 4th international conference Materials Science & Engineering, Houston TX, April 2023.
- 2.) Kassandra Garcia, J.G. Parsons, R.K. Dearth. (2022) Identifying Animal Safe Nanoparticles for Industrial Use. Poster presentation ABRCMS Anaheim, CA November 9-12.
- 3.) Chioma Chinwe Nwakanobi, K. Wrigth J.G. Parsons - Electrolysis degradation of Cyanuric Acid in Waste Water at Cu/GO Cathodes. COS Annual Research Conference online April 2023

- 4.) Joe Lara, Alexandria Castillo, Juan R. Luna, Helia Morales, Mataz Alcoutlabi, and Jason George Parsons. Synthesis, characterization, and application of vanadium phthalocyanines as a mixed heterogeneous catalyst for low temperature coupling reactions. COS Annual Research Conference online April 2023
- 5.) Joseph A Felix, J.G. Parsons - Detection of Zinc Oxide Nanoparticles in Aqueous Solution Utilizing Fluorescent Dye. COS Annual Research Conference online April 2023
- 6.) Katherine Wright H. Morales, J.G. Parsons, K.R. Flores, M. Alcoutlabi, T. Eubanks- Electrolysis for Degradation of Bisphenol A Via NiS/GO and CoS/GO. COS Annual Research Conference online April 2023
- 7.) Maria Irene Myers Armas. J. Parsons, H. Morales, K. Van der Kamp. Catalytic activity of Porphyrin Metalated Complexes in Coupling Reactions. COS Annual Research Conference online April 2023
- 8.) A Raysoni, J Sarnat, J Parsons, E Mendez, D Ramirez, H Morales, WW Li. Elemental Analysis of PM_{2.5} at four schools in El Paso, TX, USA. AGU Fall Meeting 2021
- 9.) Katherine Wright, H.M. Morales, and J.G. Parsons. Hydrothermal Synthesis of Ni₃S₂ using Microwave Irradiation. UTRGV COS Annual Research Conference online November 2021.
- 10.) Fletes A., Manjarrez A., Morales H., Mar A. and J. G. Parsons. TiO₂/ZnO Nanoparticles Applied to the photocatalytic Degradation of Simazine in Aqueous Solution. UTRGV COS Annual Research Conference online November 2021.
- 11.) Maria Meyers and J.G. Parsons. Catalytic activity of porphyrin metalated complexes in coupling reactions. UTRGV COS Annual Research Conference online November 2021.
- 12.) Elizabeth M Fletes, Mataz Alcoutlabi, Jason G. Parsons, Helia Morales. Vanadium and Titanium Nitrides LIBs anodes synthesized from Titanium and Vanadium porphyrins. UTRGV COS Annual Research Conference online November 2021.
- 13.) Irving Vazquez, Jason G. Parsons, Arnulfo Mar, Helia Morales. Removal of As(III) and As(V) from aqueous solution via Common Sunflower (Helianthus) Phytoremediation. UTRGV COS Annual Research Conference online November 2021.
- 14.) JoAnn Sanchez, Mataz Alcoutlabi, Jason Parsons, Luis Materon. Fabrication and Characterization of polyvinylpyrrolidone/copper composite fibers
- 15.) Elizabeth Fletes, H. Morales, A. Mar, J. Parsons. Fabrication of Dye-sensitized Solar Cells Based on Metal Substituted Tetraphenyl Porphyrins. Council on Undergraduate Research Conference April 2021

- 16.) Douglas A. Harris, Jason Parsons, Helia Morales. Exchange of the Magnesium Ion in Chlorophyll by a Transition Metal. Council on Undergraduate Research Conference April 2021
- 17.) Daniel Ramirez and J. G. Parsons Removal of Chromium(VI) from aqueous solution using ZnO nanoparticles an investigation in to the effects light and dark conditions. UTRGV COS Annual Research Conference online November 2020.
- 18.) Juan R. Luna, Helia Morales, and Jason George Parsons. Catalytic application of vanadium phthalocyanine in acid-based medium reactions to covert and couple saccharide bi-products. UTRGV COS Annual Research Conference online November 2020.
- 19.) Grecia Garcia, Dr. Jason Parsons Removal of As(III) and As(V) from aqueous solution via tomato seedling (*Solanum lycopersicum*) phytoremediation. UTRGV COS Annual Research Conference online November 2020.
- 20.) Douglas Harris; Jason Parsons; Helia Morales, Arnulfo Mar. Exchange of the Magnesium Ion in Chlorophyll by a Transition Metal. UTRGV COS Annual Research Conference online November 2020.
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- 22.) Katherine Wright, H.M. Morales, and J.G. Parsons. Microwave Assisted Synthesis of NiS₂ at Variable Temperatures. UTRGV COS Annual Research Conference online November 2020.
- 23.) Valeria Velazquez, J. G. Parsons, Helia M. Morales. Physiochemical analysis of arsenic species removal by *Cassia fistula* Linn. Seedlings. UTRGV COS Annual Research Conference online November 2020.
- 24.) Kevin Van der kam, Daniel Ramirez Santos Garcia, Julio Romero and J. G. Parsons. Removal of Chromium(III) from aqueous solution using ZnO nanoparticles. UTRGV COS Annual Research Conference online November 2020.
- 25.) Irving Vazquez, JG Parsons. Removal of As(III) and As(V) from aqueous solution via Common Sunflower (*Helianthus*) Phytoremediation. UTRGV COS Annual Research Conference online November 2020.
- 26.) Daniel Ramirez, Jason Parsons. THU-903 Removal of Chromium(VI) from Aqueous Solution Using ZnO Nanoparticles an Investigation in to the Effect Light and Dark Conditions on the Binding. 2019 SACNAS National Conference. Honolulu, Hawaii October 2019.
- 27.) Jason Parsons – Photocatalytic Destruction of Simazine Using Zinc Oxide-Graphene oxide composite nanomaterials under visible light. UTRGV COS Annual Research Conference Edinburg TX March 2019.

- 28.) A. Castillo, K.R. Flores, D. Ramirez and J.G. Parsons. Photocatalytic Degradation of Simazine using ZnO/GO Composites. UTRGV COS Annual Research Conference Edinburg TX March 2019
- 29.) Alexis Echavarria, Helia Morales, Jason G. Parsons. Synthesis, characterization, and application of vanadyl tetraphenyl porphyrin catalyst for hydrocarbon chain synthesis. UTRGV COS Annual Research Conference Edinburg TX March 2019
- 30.) Grecia Torreblanca, Kenneth Flores, and Jason G. Parsons. Removal of As (III) and As (V) from potable water using ZnO nanoparticles. UTRGV COS Annual Research Conference Edinburg TX March 2019.
- 31.) Joe Lara, Alexandria Castillo, Juan R. Luna, and Jason George Parsons. Synthesis, characterization, and application of vanadium phthalocyanine as a mixed heterogeneous catalyst for low temperature coupling reactions. UTRGV COS Annual Research Conference Edinburg TX March 2019.
- 32.) Juan R. Luna, Joe Lara, Alexandria Castillo, and Jason G. Parsons. Applications of vanadium phthalocyanine in catalytic, acid-based medium to couple saccharide bi-products. UTRGV COS Annual Research Conference Edinburg TX March 2019
- 33.) Maggie Padron, Alejandro Palacios, Aaron Longoria, Esmeralda Gonzalez, Zachary Hurtado, Jason G. Parsons. Removal of As(III) and As(VI) ions from aqueous solution using SnO₂ nanoparticles: A thermodynamics study. UTRGV COS Annual Research Conference Edinburg TX March 2019
- 34.) Cesar Cortez, Patricia Flores, Jennifer Gonzalez, Valeria Velazquez, Gerardo Ybarra, Kenneth Flores and J.G. Parsons. Removal of Pb(II) ions from aqueous solution using ZnO nanoparticles UTRGV COS Annual Research Conference Edinburg TX March 2019.
- 35.) Kenneth Flores, Diego Gonzalez, Jason Parsons. ANYL 205: Absorption of chromium via amino modified biochar. 255th ACS National Meeting March 2018, New Orleans, LA.
- 36.) Diego Gonzalez, Jason Parsons, Javier Alejandro Perez. ANYL 206: Effects on alternating the concentration of the bases and temperature in Suzuki cross coupling reactions. 255th ACS National Meeting March 2018, New Orleans, LA.
- 37.) Jesus M Cantu, Diego Gonzalez, Jason Parsons, Carolina Valdes, John Valle. ANYL 211: Removal of chromium(III) and chromium(VI) from aqueous solution using K₂Mn₄O₉ under light conditions. 255th ACS National Meeting March 2018, New Orleans, LA.
- 38.) Samantha Balboa, Jesus M Cantu, Brenda Verenisse Gonzales, Esmeralda Guevara, Sandra Sarahy Huerta, Jason Parsons, Javier Alejandro Perez, Carolina Valdes.

ANYL 83: Removal of Cu^{2+} and Pb^{2+} from aqueous solution using $\text{K}_2\text{Mn}_4\text{O}_5$ nanomaterial. 255th ACS National Meeting March 2018, New Orleans, LA.

- 39.) Juan Ricardo Luna, Helia M. Morales, Jason Parsons, CATL 354: Synthesis and catalytic activity of NiMoS_2 in the removal of dibenzothiophene from model fuels. 255th ACS National Meeting March 2018, New Orleans, LA.
- 40.) Christian Cervantes, Helia M. Morales, Jason Parsons, CHED 941. Photocatalytic destruction of endocrine disrupting chemicals. 255th ACS National Meeting March 2018, New Orleans, LA.
- 41.) Carolina Valdes; Diego F. Gonzalez; Jason Parsons. Hydrodesulfurization of Dibenzothiophene with Lanthanum Doped CoMoS_2 . UTSA Main Campus San Antonio TX, Oct. 2017.
- 42.) Karina Marquez; J. Cantu; C. Valdes; J.G. Parsons. Synthesis of TiO_2 Nanomaterial for Removal of Arsenic (III) and Arsenic (V) in Aqueous Solution Studies. UTSA Main Campus San Antonio TX, Oct. 2017.
- 43.) Javier Perez; Alex Garza; Troy Olsen; Diego F. Gonzalez; Carolina Valdes; Jesus Cantu; J.G. Parsons. Effects on Alternating the Concentration of the Bases and Temperature in Suzuki Cross Coupling Reactions. UTSA Main Campus San Antonio TX, Oct. 2017.
- 44.) Kenneth Flores; Diego F. Gonzalez; Jason G. Parsons. Adsorption of Chromium (VI) & (III) via Amino Modified Biochar. UTSA Main Campus San Antonio TX, Oct. 2017.
- 45.) Mireles, S., J. Parsons, T. Trad, C-L Cheng, J. Kang (October 24, 2017). Corn stover, Orange peel, and pistachio shell biochars as a filter media for removing lead and arsenic in water, Annual meeting of the ASA-CSSA-SSSA-CSSS Soil Science Society of America in Tempa, Florida. Oct. 2017
- 46.) Jesus Cantu; Carolina Valdes; John Paul Valle; Kenneth Flores; Jason G Parsons. Adsorption of Pb(II) and Cu(II) from Water Using TiS_2 . UTSA Main Campus San Antonio TX, Oct. 2017.
- 47.) John Valle; J.G. Parsons. Binding of Cr(III) and Cr(VI) to Rancieite-Type Nanomaterial Under Light Conditions. UTSA Main Campus San Antonio TX, Oct. 2017.
- 48.) J.G. Parsons, J.S. Sollner, D.F. Gonzalez, J.H. Leal, T.M. Eubanks Catalytic removal of Dibenzothiophene using CoMoS_2 synthesized using elemental sulfur. 253rd ACS National Meeting April 2017.
- 49.) C. Valdes, D.F. Gonzalez, J.G. Parsons. Hydrodesulfurization of dibenzothiophene using lanthanum doped CoMoS_2 catalysts. 253rd ACS National Meeting April 2017.

- 50.) D.F. Gonzalez, K. Flores, M. Gonzalez, A. Cantu, C. Serna, T.M. Eubanks, J.G. Parsons. Removal of chromium(VI) and chromium(III) ions from aqueous solution using biochar generated from agricultural waste products. 253rd ACS National Meeting April 2017.
- 51.) J. Cantu, J.G. Parsons. Adsorption of copper and lead to ZnS nanomaterial. . 253rd ACS National Meeting April 2017.
- 52.) K. Flores, D.F. Gonzalez, J.G. Parsons. Adsorption of chromium(VI) metal ions via amino modified biochar. 253rd ACS National Meeting April 2017.
- 53.) S. Mireles, H. Rivera, J. Kang, T. Trad, J.G. Parsons. Synthesis of biochars using household and agricultural byproducts (orange peel, pistachio shells, and corn stover) and their application in lead adsorption from aqueous solutions. 253rd ACS National Meeting April 2017.
- 54.) T. Olson, J.G. Parsons. Aqueous solution palladium catalyzed Suzuki cross coupling reactions: Reaction optimization of base and the effects of base concentration. 253rd ACS National Meeting April 2017.
- 55.) J.G. Parsons, J.S. Sollner, D.F. Gonzalez, J.H. Leal, T.M. Eubanks Catalytic removal of Dibenzothiophene using CoMoS₂ synthesized using elemental sulfur. UTSA Annual Science Research Symposium October 2017.
- 56.) C. Valdes, D.F. Gonzalez, J.G. Parsons. Hydrodesulfurization of dibenzothiophene using lanthanum doped CoMoS₂ catalysts. UTSA Annual Science Research Symposium October 2017.
- 57.) D.F. Gonzalez, K. Flores, M. Gonzalez, A. Cantu, C. Serna, T.M. Eubanks, J.G. Parsons. Removal of chromium(VI) and chromium(III) ions from aqueous solution using biochar generated from agricultural waste products. UTSA Annual Science Research Symposium October 2017.
- 58.) J. Cantu, J.G. Parsons. Adsorption of copper and lead to ZnS nanomaterial. UTSA Annual Science Research Symposium October 2017.
- 59.) K. Flores, D.F. Gonzalez, J.G. Parsons. Adsorption of chromium(VI) metal ions via amino modified biochar. UTSA Annual Science Research Symposium October 2017.
- 60.) S. Mireles, H. Rivera, J. Kang, T. Trad, J.G. Parsons. Synthesis of biochars using household and agricultural byproducts (orange peel, pistachio shells, and corn stover) and their application in lead adsorption from aqueous solutions. UTSA Annual Science Research Symposium October 2017.
- 61.) T. Olson, J.G. Parsons. Aqueous solution palladium catalyzed Suzuki cross coupling reactions: Reaction optimization of base and the effects of base concentration. UTSA Annual Science Research Symposium October 2017.

- 62.) Diego Gonzalez, Jacob Sollner, Jason Parsons. Hydrodesulfurization of dibenzothiophene using bimetallic and trimetallic: Cobalt, nickel, tungsten sulfide. 251st ACS National Conference San Diego March 2016
- 63.) Troy Olson, Jason Parsons. Aqueous solution palladium catalyzed Suzuki cross coupling reactions: The effect of base and base concentrations. 251st ACS National Conference San Diego March 2016
- 64.) M. Jasim Uddin, Glenn Grissom, Miguel Leal, Veronica Galvez, Tarek Trad, Ahmed Touhami, Nazmul Islam, Jason Parsons, H. Justin Moore. Self-aligned carbon nanotubes yarns for multifunctional optoelectronic applications. Proceedings of the ASME's International Mechanical Engineering Congress and Exposition (IMECE). (2016)
- 65.) Carolina J Olivares, Diego Gonzalez, Jacob Sollner, Jason G. Parsons. Hydrodesulphurization of DBT using NEBULA. UTSA College of Science Research Symposium Oct. 2015.
- 66.) Itzel Lopez, Kenneth Flores, Diego Gonzalez, and Jason G. Parsons. Adsorption of Cd(II) to Graphene Oxide. UTSA College of Science Research Symposium Oct. 2015.
- 67.) Kenneth Flores, Troy Olson, Cindy Duran, Diego Gonzales, Jason G. Parsons. Removal of Cu²⁺ and Pb²⁺ from water via Graphene Oxide. UTSA College of Science Research Symposium Oct. 2015.
- 68.) Jesus Cantu, Edwin Gonzalez, Jacqueline Goodship, Monica Contreras, Meera Joseph, Cameron Garza, and Jason G. Parsons. Adsorption of Arsenic to Fe₇S₈. UTSA College of Science Research Symposium Oct. 2015.
- 69.) Diego F. Gonzalez, Jacob Sollner, Jose Garces, Maria Hernandez, Edith Jones, Bernie Garza, Karrie Williams, Jason Parsons. Hydrodesulfurization of dibenzothiophene using Bimetallic and Trimetallic: Cobalt, Nickel, Tungsten Sulfide. UTSA College of Science Research Symposium Oct. 2015.
- 70.) Jacob S. Sollner, Diego Gonzalez, Jason G. Parsons. Hydrodesulphurization of DBT using CoMoS₂ catalyst. UTSA College of Science Research Symposium Oct. 2015
- 71.) I.A. Montemayor, J.S. Sollner, D.F. Gonzalez, J.G. Parsons. Hydrodesulphurization of the DBT using low ratio nickel-molybdenum sulfide catalysts. ACS National Conference Denver CO. March 22-25, 2015. CATL 195
- 72.) D.F. Gonzalez, K. Williams, J.S. Sollner, J.G. Parsons. Hydrodesulfurization of dibenzothiophene using tungsten, cobalt and nickel. ACS National Conference Denver CO. March 22-25, 2015. CATL 200
- 73.) J.S. Sollner, D.F. Gonzalez, J.G. Parsons. Hydrodesulphurization of DBT using CoMoS₂ catalyst. ACS National Conference Denver CO. March 22-25, 2015. CATL 201

- 74.) D. Cedillo, J. Garcia, T. Trevino, J.G. Parsons, J. Gutierrez-Gonzales Kinetics of the reduction of nitrobenzene using hydrazine hydrate and cobalt(II) sulfide. ACS National Conference Denver CO. March 22-25, 2015.
- 75.) L. Ramirez, J. Gutierrez-Gonzales, J.G. Parsons, N. Izquierdo Reduction of nitrobenzene derivatives using crystalline polymorphs of cobalt(II) sulfide and sodium borohydride. ACS National Conference Denver CO. March 22-25, 2015. CHED 1168.
- 76.) Cedillo, Diana M.; Martinez, Adam; Pina, Samuel, Jr.; Tamez, Carlos; Parsons, Jason G.; Gutierrez, Jose J. Synthesis of a water-soluble distyrylbenzene derivative. 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), POLY-540.
- 77.) Cedillo, Diana M.; Martinez, Adam; Pina, Samuel, Jr.; Tamez, Carlos; Parsons, Jason; Gutierrez, Jose J. Synthesis of two novel distyrylbenzene derivatives. 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), CHED-1234.
- 78.) Izquierdo, Nezhueyotl; Pina, Samuel; Cedillo, Diana; Tamez, Carlos; Parsons, Jason G.; Gutierrez, Jose J. Reduction of nitrobenzene derivatives using sodium borohydride and transition metal sulfides. 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), CHED-61.
- 79.) Pina, Samuel, Jr.; Izquierdo, Nezhueyotl; Cedillo, Diana M.; Tamez, Carlos; Parsons, Jason G.; Gutierrez, Jose J. Synthesis of aromatic amines via heterogeneous reduction of nitrobenzene derivatives using sodium borohydride and transition metal sulfides. 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), CATL-253.
- 80.) Sandra Garcia Esther Salinas, J.G. Parsons. Cytotoxicity of Gold, Palladium, and Silver Nanoparticles Stabilized using CTAB and Citrate. Annual Biomedical Research Conference for Minority Students (ABRCMS) 2013
- 81.) Parsons J.G. Oxidation of dibenzothiophene to dibenzothiophene sulfone using transition metal oxides. Petrochemistry 2013.
- 82.) Leal, J. H., Parsons, J.G. Investigation of the Catalytic Oxidation of Dibenzothiophene to Dibenzothiophene-Sulfone Using TiO₂. Petrochemistry November 2013 San Antonio.
- 83.) Jacob Sollner, Jason Parsons. Oxidation of nitrogen heterocyclic compounds using molybdenum(vi) oxide as a catalyst. 2013 SACNAS National Conference San Antonio TX.

- 84.) M. Esther Salinas, Jason Parsons. Biocompatibility studies of precious metal nanoparticles evaluated by *in vitro* cytotoxicity assays using liver and breast cancer cell lines. 2013 SACNAS National Conference San Antonio TX.
- 85.) Carlos Tamez Jr., Jason Parsons. Remediation of cu (ii) and pb (ii) from aqueous solution using engineered iron oxide nanoparticles. 2013 SACNAS National Conference San Antonio TX.
- 86.) Carlos Tamez and Jason Parsons. Thermodynamics of Cu(II) and Pb(II) Adsorption on to Iron Oxide and Manganese Oxide Nanomaterials. University of Texas San Antonio, October 2013 UTSA Research Conference.
- 87.) M. Esther Salinas, Jason Parsons. Biocompatibility studies of precious metal nanoparticles evaluated by *in vitro* cytotoxicity assays using liver and breast cancer cell lines. University of Texas San Antonio, October 2013 UTSA Research Conference.
- 88.) Erving W. Morelius and J. G. Parsons. Survey for Heavy Metals of the Donna Reservoir and Canal Systems. University of Texas San Antonio, October 2013 UTSA Research Conference.
- 89.) Samuel Piña Jr, Carlos Tamez, Nezhueyotl Izquierdo, Jason G. Parsons, Jose J. Gutierrez. REDUCTION OF NITROAROMATIC COMPOUNDS USING SODIUM BOROHYDRIDE VIA TRANSITION METAL SULFIDES University of Texas San Antonio, October 2013 UTSA Research Conference.
- 90.) Nezhueyotl Izquierdo, Samuel Piña Jr, Carlos Tamez, Jason G. Parsons, Jose J. Gutierrez Transition Metals Sulfides Catalyzed Reduction of Nitrobenzene University of Texas San Antonio, October 2013 UTSA Research Conference.
- 91.) Samuel Piña Jr, Carlos Tamez, Jason G. Parsons, and Jose J. Gutierrez. REDUCTION OF AROMATIC NITRO COMPOUNDS USING SODIUM BOROHYDRIDE AND TRANSITION METAL SULFIDES Materials Research Society Meeting Cancun MX Aug 11-15 2013.
- 92.) Mao, Y.; Parsons, J. G.; McCloy, J. S. Synthesis and magnetic properties of double perovskite La_2BMnO_6 (B=Ni or Co) nanoparticles Nanotech Conference & Expo 2013: An Interdisciplinary Integrative Forum on Nanotechnology, Microtechnology, Biotechnology and Clean technology, Washington, DC, United States, May 12-16, 2013 (2013), 1, 707-710.
- 93.) F.J. Dirrigl Jr., J.G. Parsons, T.M. Eubanks, and K.L. Lowe. Arsenic Tolerance and Accumulation Through a Hypersaline Food Web. Proceedings of the International Conference on Biodiversity and Sustainable Energy Development, Hyderabad, India. Journal of Ecosystem and Ecography 2(4):62, 2012

- 94.) Alfredo Esparza, Jason Parsons. Nanophase MnFe_2O_4 synthesis (SACNAS 2012 Conference), Seattle Washington.
- 95.) Jisoo Kim, Jason Parsons, Removal of Chromium From Aqueous Solution: A Study on the Effects of PH and Temperature Using Iron Oxide Nanomaterials. (SACNAS 2012 Conference). Seattle Washington.
- 96.) Isaac Rodriguez, Jason Parsons. Removal of Arsenic(III) and Arsenic(V) anions from Aqueous solution using engineered Mn_3O_4 Nanomaterials. (SACNAS 2012 Conference). Seattle Washington.
- 97.) Tamez, Carlos; Hernandez, Rebecca; Jason Parsons. Removal of Copper and Lead using Engineered Iron Nanomaterials 68th Southwest Regional Meeting of the American Chemical Society, Baton Rouge, LA, United States, November 4-7 (2012), SWRM-500.
- 98.) F. Ruiz, F. J. Into, E.R. Garza, Y. E. Cerino, A. Yang, M.J. Lo, J.J. Bunagan, H. M. Hernandez, J.G. Parsons, M.W. Persans. Comparison of metal tolerance mechanisms between non-accumulator a and hyperaccumulator plant species in the Brassicaceae plant Family. (HESTEC 2012).
- 99.) A. Esparza, G. Martinez, C. Tamez, J.G. Parsons. Removal of cadmium(II) ions from aqueous solution using engineered nano-jacobsite particles. (HESTEC 2012)
- 100.) Rebecca Hernandez, C. Tamez, J.G. Parsons. Removal of copper and lead using engineered iron oxide nanomaterials. (HESTEC 2012)
- 101.) I. Rodriguez, C. Tamez, Jason Parsons. Removal of Arsenic(III) and arsenic(V) anions from aqueous solution using engineered Mn_3O_4 nanomaterials. (HESTEC 2012)
- 102.) J. Kim, S. Luther, J.G. Parsons. Removal of chromium from aqueous solution: a study on the effects of pH, and temperature using iron oxide nanomaterials. (HESTEC 2012)
- 103.) Jisoo Kim, J. G. Parsons Removal of Uranium and Selenium from Aqueous Solution using Synthesized Nanomaterials. (HESTEC 2011)
- 104.) Kathia Hurtado and J. G. Parsons. Removal of As(III) and As(V) from Aqueous Solution Using Engineered Metal Oxide Nanomaterials (HESTEC 2011)
- 105.) USDA HSI Project Directors Conference May 30th- June 2nd 2012 in Edinburg TX Florestella Ruiz, Fritizie J Into, Elyssa R. Garza, Yessica E. Cerino, Amery Yang, Michelle J. Lo, ¹Jennifer J. Bunagan, Heather M. Hernandez, Jason G. Parsons, and Michael W. Persans Comparison of metal tolerance mechanisms between nonaccumulator and hyperaccumulator plant species in the *Brassicaceae* plant family

- 106.) The American Society of Plant Biologists Annual Meeting, Austin TX, July 20-24th 2012. Florestella Ruiz, Fritzie J Into, Elyssa R. Garza, Yessica E. Cerino, Amery Yang, Michelle J. Lo, Jennifer J. Bunagan, Heather M. Hernandez, Jason G. Parsons, and Michael W. Persans Comparison of metal tolerance mechanisms between nonaccumulator and hyperaccumulator plant species in the *Brassicaceae* plant family.
- 107.) Exposure to Low-Level Arsenic (As) Suppresses Circulating IGF-1 Resulting in Delayed Female Pubertal Development. James C. Saca, Michael P. Reilly, Wendy Whitehouse-Innis, Jason G. Parsons, and Robert K. Given at ENDO 2011, June 4–7 in Boston, Massachusetts.
- 108.) Distribution and pathways of Arsenic in a hypersaline estuary Brian L Fredensborg, German Riojas, Thomas A Eubanks, Alondra Hernandez, Flor A Sandoval, Steven Luther, Ramiro Garza, Hudson DeYoe, Frank Dirrigl Jr, Jason Parsons, Michael W Persans and Kristine Lowe Given at:Ecological Society of America Austin, Texas, August 7-12.
- 109.) Survey of heavy metal and metalloid content of the seagrass *Thalassia testudinum* in the Lower Laguna Madre of Texas. Flor A. Sandoval, Elliot Chavez, Steven D. Luther, Yessica E. Cerino, Michelle J. Lo, Hudson R. DeYoe, Jason G. Parsons, and Michael W. Persans, The University of Texas - Pan American, Edinburg TX.
- 110.) Exploration of the mechanisms of copper tolerance in *Mimulus guttatus* var. Copperopolis Michelle J. Lo*, Jennifer J. Bunagan*, Jason G. Parsons and Michael W. Persans, The University of Texas - Pan American, Edinburg TX. (2010)
- 111.) Investigating heavy metal accumulation and oxidative stress tolerance of nonaccumulators and hyperaccumulators in the *Brassicaceae* plant family. Fritzie J. Into*, Yessica E. Cerino, Michelle J. Lo, Amery Yang, Jason G. Parsons and Michael W. Persans, The University of Texas-Pan American, Edinburg, TX (2010)
- 112.) Relationship between foliar concentrations of arsenic and spectral reflectance by foliage of common sunflower, *Helianthus annuus*. Yuridia Patricia Gandy,* Kenneth Rod Summy, Elamin Ibrahim, Jason Parsons, Michael Persans, University of Texas-Pan American, Edinburg, TX. (2010)
- 113.) Sorption and interference batch studies of selenite (SeO₃²⁻) and selenate (SeO₄²⁻) to engineered nano-Jacobsite in aqueous solutions: Gonzalez, Christina M.; Hernandez, Jeffrey E.; Gardea-Torresdey, Jorge L.; Parsons, Jason G. From Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), ENVR-205
- 114.) Hernandez, Jeffrey E.; Gonzalez, Christina M.; Parsons, Jason G.; GardeaTorresdey, Jorge L. From Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), ENVR-204

- 115.) Sorption of Selenite (SeO_3^{2-}) and Selenate (SeO_4^{2-}) to Engineered Nano-Jakobsite: Christina Gonzalez, Jeffrey Hernandez, Jason Parsons, Jorge Gardea-Torresdey. SACNAS National Meeting 2009.
- 116.) Sorption of Chromium(III) and Chromium(VI) to High and Low Pressure Nano-Magnetite Particles (Fe_3O_4): Jeffrey Hernandez, Christina Gonzales, Jason Parsons, Jorge Gardea-Torresdey. SACNAS National Meeting 2009.
- 117.) Formation of Gold Nanoparticels Using Alfalfa Plant Extracts: Milka O. MontesHolguin, Jason G. Parsons, Jose R. Peralta-Videa, Jorge L. Gardea-Torresdey. SACNAS National Meeting 2009.
- 118.) Chromium uptake and speciation by both desert and non-desert plant species. Parsons, Jason G.; de la Rosa, Guadalupe; Gardea-Torresdey, Jorge L. Preprints of Extended Abstracts presented at the ACS National Meeting, American Chemical Society, Division of Environmental Chemistry (2007), 47(1), 989-995.
- 119.) Chemical and spectroscopic approaches to determine the adsorption of chromium species to saltbush (*Atriplex canescens*) biomass. Sawalha, Maather F.; Peralta-Videa, Jose R.; Parsons, Jason G.; Gardea-Torresdey, Jorge L. Preprints of Extended Abstracts presented at the ACS National Meeting, American Chemical Society, Division of Environmental Chemistry (2007), 47(1), 1001-1005.
- 120.) Reduction of health risks due to chromium(VI) using Mesquite: A potential Cr phytoremediator. Gardea-Torresdey, Jorge L.; Aldrich, Mary V.; Peralta-Videa, Jose; Parsons, Jason. Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), ENVR-046.
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- 123.) ICP/OES and XAS studies of the Cd uptake by tumbleweed De la Rosa, Guadalupe; Gardea-Torresdey, Jorge L.; Peralta-Videa, Jose; Montes, Milka; Parsons, Jason. Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23-27, 2003 (2003), ENVR-066.

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- 125.) Binding mechanism of silver(I) ions to alfalfa biomass: Batch and x-ray absorption spectroscopy. Herrera, I.; Gardea-Torresdey, J. L.; Tiemann, K. J.; Dokken, K.; Parsons, J. G. Proceedings - Application of Waste Remediation Technologies to Agricultural Contamination of Water Resources Conference, Kansas City, MO, United States, July 30-Aug. 1, 2002 (2002), 233-247.
- 126.) Study of the effects of heavy metals on seed germination and plant growth of alfalfa plant (*Medicago sativa*) grown in solid media. Peralta, J. R.; Gardea-Torresdey, J. L.; Tiemann, K. J.; Gomez, E.; Arteaga, S.; Rascon, E.; Parsons, J. G. Proceedings of the Conference on Hazardous Waste Research: Environmental Challenges and Solutions to Resource Development, Production, and Use, Denver, CO, United States, May 23-25, 2000 (2000), 135-140. Publisher: Great Plains/Rocky Mountain Hazardous Substance Research Center, Kansas State University, Manhattan, Kansas
- 127.) Determination of trace-level gold(III) binding to alfalfa biomass using GFAAS with Zeeman background correction. Parsons, J. G.; Gamez, G.; Tiemann, K. J.; GardeaTorresdey, J. L. Proceedings of the Conference on Hazardous Waste Research: Environmental Challenges and Solutions to Resource Development, Production, and Use, Denver, CO, United States, May 23-25, 2000 (2000), 2-12. Publisher: Great Plains/Rocky Mountain Hazardous Substance Research Center, Kansas State University, Manhattan, Kansas
- 128.) Environmental applications of hops derived biomaterials for the purpose to remove toxic metal ions from solution. Gardea-Torresdey, J.; Hejazi, M.; Parsons, J. G.; Tiemann, K.; Henning, J. Abstr. Pap. - Am. Chem. Soc. (2001), 221st ENVR-214 41(1), 441-446.
- 129.) Use of GFAAS and ICP to determine trace and high level Pt(II) and Pt(IV) adsorption by alfalfa biomass from environmental solutions. Parsons, Jason; Tiemann, Kirk; Gonzalez, Jorge H.; Gardea-Torresdey, Jorge L. Abstr. Pap. - Am. Chem. Soc. (2001), 221st ENVR-215.
- 130.) Environmental analysis of copper ions with a carbon paste electrode modified with alfalfa biomass. Tiemann, Kirk; Gamez, Gerardo; Parsons, Jason; Bess-Oberto, Lucero; Armindariz, Veronica; Mahmoud, Jawad; Gardea-Torresdey, Jorge. Abstr. Pap. - Am. Chem. Soc. (2001), 221st ENVR-214.
- 131.) Characterization of Cr(VI) binding and reduction to Cr(III) by the agricultural byproducts of *Avena monida* (Oat) biomass. Gardea-Torresdey, J. L.; Tiemann, K. J.;

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- 134.) Chemical processes involved in Au(III) binding and bioreduction by alfalfa biomass. Gamez, G.; Dokken, K.; Herrera, I.; Parsons, J. G.; Tiemann, K. J.; Gardea-Torresdey, J. L. *Proceedings of the Conference on Hazardous Waste Research: Environmental Challenges and Solutions to Resource Development, Production, and Use*, Denver, CO, United States, May 23-25, (2000), 46-53. Publisher: Great Plains/Rocky Mountain Hazardous Substance Research Center, Kansas State University, Manhattan, Kansas
- 135.) Electrochemical studies of Cu(II) binding to alfalfa biomass. Tiemann, K. J.; Gamez, G.; Parsons, J. G.; Dokken, K.; Herrera, I.; Bess-Oberto, L.; Armendariz, V.; Mahmoud, J.; Gardea Torresdey, J. J. *Proceedings of the Conference on Hazardous Waste Research: Environmental Challenges and Solutions to Resource Development, Production, and Use*, Denver, CO, United States, May 23-25, 2000 (2000), 13-21. Publisher: Great Plains/Rocky Mountain Hazardous Substance Research Center, Kansas State University, Manhattan, Kansas
- 136.) Phyto-extraction: Removal of metal ions from aqueous solution by biomass and silicaimmobilized biomass of *Chara globularis* (Stone Wort) And *Satureja hortensis* L. (Summer Savory). Parkinson, Don-R.; Parsons, Jason. Editor(s): Clement, Ray; Burk, Bob. *EnviroAnalysis, Proceedings of the Biennial International Conference on Chemical Measurement and Monitoring of the Environment*, 2nd, Ottawa, ON, Canada, May 11-14, 1998 (1998), 675-680. Publisher: Conference Secretariat, Chemistry Dep., Carleton University, Ottawa, Ont

Invited Presentations:

Invited Presentation at the ERACH July 2012 On the Removal of Arsenic from Water using Engineered Nanomaterials.

Invited presentation ACS Regional Meeting STC October 2010: Removal of Arsenic from Water

Using Engineered Metal Oxide Nanomaterials

PerkinElmer AAS/ICP User's Meeting Invited guest speaker July (2001)

PerkinElmer AAS/ICP User's Meeting Invited guest speaker December (2001)

PerkinElmer AAS/ICP User's Meeting Invited guest speaker December (2001)