

Juan C. Noveron, Ph. D.

Ralph and Kathleen Ponce de Leon Professor

Department of Chemistry and Biochemistry

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Education

- 2000 – 2002 Ruth L. Kirschstein NIH Postdoctoral Fellow, University of Utah
Department of Chemistry and Biochemistry
Mentor: Dr. Peter J. Stang
- 2000 Ph.D. Chemistry – University of California Santa Cruz
Department of Chemistry and Biochemistry
Dissertation title: “Synthesis and Characterization of Functional and Structural Analogues of the Active Sites of the Fe- and Co-containing Nitrile Hydratases”
Mentor: Dr. Pradip K. Mascharak
- 1994 B.A. Chemistry – California State University Long Beach
Department of Chemistry and Biochemistry

Positions

- 2015 – Ralph & Kathleen Ponce de Leon Professor; Chemistry; The University of Texas at El Paso, Department of Chemistry and Biochemistry, NIH Border Biomedical Research Center, and NSF ERC Nanoengineered Water Treatment Center
- 2014 – 2019 Director of the USDA I-Discover Program – a consortium of three universities – the University of Texas at El Paso, New Mexico State University, and the University of Texas at San Antonio – to integrate research and education in Sustainability Science
- 2009 – Associate Professor; Chemistry; The University of Texas at El Paso, Department of Chemistry and Biochemistry, and NIH Border Biomedical Research Center
- 2003 – 2008 Assistant Professor; Chemistry; The University of Texas at El Paso, Department of Chemistry and Biochemistry, and NIH Border Biomedical Research Center
- 2000 – 2002 Postdoctoral Research Associate; Ruth L. Kirschstein F32 NIH Postdoctoral Fellowship, University of Utah, Department of Chemistry and Biochemistry
- 1994 – 2000 Research Assistant, GAANN Fellowship; Chemistry, University of California Santa Cruz, Department of Chemistry and Biochemistry
- 1990 – 1993 Research Assistant, NIH MARC MBRS Fellowship; Chemistry, California State University Long Beach, Department of Chemistry and Biochemistry

Honors

2015	Ralph & Kathleen Ponce de Leon Professorship
2015	Inducted as Life-fellow to the University of Texas System Academy of Distinguished Teachers
2013	COURI Faculty Mentor Award
2009	University of Texas System Regents' Outstanding Teaching Award
2008	National Science Foundation CAREER Award
2001	Ruth L. Kirschstein NIH Postdoctoral Fellowship Award
1998	Distinguished Service Award, University of California Santa Cruz
1992	NIH MARC MBRS – Undergraduate Fellowship

Grants

2020 – 2025	PI	\$250,000	National Institute of Food and Agriculture
2020 – 2025	Co-PI	\$36,000,000	National Science Foundation - ERC
2015 – 2020	Co-PI	\$2,000,000	National Institute of Food and Agriculture
2014 – 2019	PI	\$1,000,000	National Institute of Food and Agriculture
2013 – 2016	Co-PI	\$2,000,000	National Science Foundation – MRI
2012 – 2017	Co-PI	\$5,000,000	National Science Foundation – PREM
2012 – 2015	Co-PI	\$500,000	National Science Foundation – MRI
2008 – 2013	PI	\$568,000	National Science Foundation – CAREER
2007 – 2012	Co-PI	\$2,000,000	National Science Foundation – DUE
2007 – 2008	PI	\$50,000	National Science Foundation – SGER
2007 – 2009	PI	\$35,000	Petroleum Research Foundation
2006 – 2008	PI	\$30,000	Coldwell Foundation
2001 – 2003	PI	\$68,000	National Institute of Health – F32
1997 – 2000	PI	\$50,000	Department of Education – GAANN

Publications

PUBLICATIONS (70), PATENTS (3), PROVISIONAL DISCLOSURES (7), PRESENTATIONS (179)

Peer-reviewed Publications

- (70) Ahsan, M. A.; He, T.; Eid, K.; Abdullah, A. M.; Curry, M. L.; Du, A.; Puente Santiago, A. R.; Echegoyen, L.; Noveron, J. C. Tuning the Intermolecular Electron Transfer of Low-Dimensional and Metal-Free BCN/C60 Electrocatalysts via Interfacial Defects for Efficient Hydrogen and Oxygen Electrochemistry. *Journal of the American Chemical Society*, **2021**. DOI:[10.1021/jacs.0c12386](https://doi.org/10.1021/jacs.0c12386)
- (69) Sultana, K. A.; Islam, T.; Silva, J. A.; Turley, R. S.; Hernandez-Viezcas, J. A.; Gardea-Torresdey, J. L.; Noveron, J. C. Sustainable synthesis of zinc oxide nanoparticles for photocatalytic degradation of organic pollutant and generation of hydroxyl radical. *Journal of Molecular Liquids* **2020**, 112931. DOI:[10.1016/j.molliq.2020.112931](https://doi.org/10.1016/j.molliq.2020.112931)

- (68) Díaz-Moreno, C. A.; Khanal, N.; Macías, A. H.; Noveron, J.; López, J. A. Structural and second harmonic generation properties of nanogel of niobium oxide nanoparticles. *Materials Chemistry and Physics* **2020**, *255*, 123579. DOI:[10.1016/j.matchemphys.2020.123579](https://doi.org/10.1016/j.matchemphys.2020.123579)
- (67) Cleetus, C. M.; Alvarez Primo, F.; Fregoso, G.; Lalitha Raveendran, N.; Noveron, J. C.; Spencer, C. T.; Ramana, C. V.; Joddar, B. Alginate Hydrogels with Embedded ZnO Nanoparticles for Wound Healing Therapy. *International Journal of Nanomedicine* **2020**, *15*, 5097-5111. DOI:[10.2147/IJN.S255937](https://doi.org/10.2147/IJN.S255937)
- (66) Breister, A. M.; Imam, M. A.; Zhou, Z.; Ahsan, M. A.; Noveron, J. C.; Anantharaman, K.; Prabhakar, P. Soil microbiomes mediate degradation of vinyl ester-based polymer composites. *Nature Communications Materials* **2020**, *1*, 1-15. DOI:[10.1038/s43246-020-00102-1](https://doi.org/10.1038/s43246-020-00102-1)
- (65) Barrera, L. A.; Escobosa, A. C.; Nevarez, A.; Ahsan, M. A.; Alsaihati, L. S.; Noveron, J. C. Nanoparticle-templated conversion of glucose to a high surface area biocarbon for the removal of organic pollutants in water. *Water Sci Technol* **2020**, *82*, 1370-1379. DOI:[10.2166/wst.2020.410](https://doi.org/10.2166/wst.2020.410)
- (64) Ahsan, M. A.; Santiago, A. R. P.; Sanad, M. F.; Weller, J. M.; Fernandez-Delgado, O.; Barrera, L. A.; Maturano-Rojas, V.; Alvarado-Tenorio, B.; Chan, C. K.; Noveron, J. C. Tissue paper-derived porous carbon encapsulated transition metal nanoparticles as advanced non-precious catalysts: Carbon-shell influence on the electrocatalytic behaviour. *Journal of Colloid and Interface Science* **2020**, *581*, 905-918. DOI:[10.1016/j.jcis.2020.08.012](https://doi.org/10.1016/j.jcis.2020.08.012)
- (63) Ahsan, M. A.; Santiago, A. R. P.; Rodriguez, A.; Maturano-Rojas, V.; Alvarado-Tenorio, B.; Bernal, R.; Noveron, J. C. Biomass-derived ultrathin carbon-shell coated iron nanoparticles as high-performance tri-functional HER, ORR and Fenton-like catalysts. *Journal of Cleaner Production* **2020**, *275*, 124141. DOI:[10.1016/j.jclepro.2020.124141](https://doi.org/10.1016/j.jclepro.2020.124141)
- (62) Ahsan, M. A.; Santiago, A. R. P.; Nair, A. N.; Weller, J. M.; Sanad, M. F.; Valles-Rosales, D. J.; Chan, C. K.; Sreenivasan, S.; Noveron, J. C. Metal-Organic frameworks-derived multifunctional carbon encapsulated metallic nanocatalysts for catalytic peroxydisulfate activation and electrochemical hydrogen generation. *Molecular Catalysis* **2020**, *498*, 111241. DOI:[10.1016/j.mcat.2020.111241](https://doi.org/10.1016/j.mcat.2020.111241)
- (61) Ahsan, M. A.; Puente Santiago, A. R.; Hong, Y.; Zhang, N.; Cano, M.; Rodriguez-Castellon, E.; Echegoyen, L.; Sreenivasan, S. T.; Noveron, J. C. Tuning of Trifunctional NiCu Bimetallic Nanoparticles Confined in a Porous Carbon Network with Surface Composition and Local Structural Distortions for the Electrocatalytic Oxygen Reduction, Oxygen and Hydrogen Evolution Reactions. *Journal of the American Chemical Society* **2020**, *142*, 14688-14701. DOI:[10.1021/jacs.0c06960](https://doi.org/10.1021/jacs.0c06960)
- (60) Ahsan, M. A.; Jabbari, V.; Imam, M. A.; Castro, E.; Kim, H.; Curry, M. L.; Valles-Rosales, D. J.; Noveron, J. C. Nanoscale nickel metal organic framework decorated over graphene oxide and carbon nanotubes for water remediation. *Sci Total Environ* **2020**, *698*, 134214. DOI:[10.1016/j.scitotenv.2019.134214](https://doi.org/10.1016/j.scitotenv.2019.134214)
- (59) Ahsan, M. A.; Imam, M. A.; Santiago, A. R. P.; Rodriguez, A.; Alvarado-Tenorio, B.; Bernal, R.; Luque, R.; Noveron, J. C. Spent tea leaves templated synthesis of highly active and durable cobalt-based trifunctional versatile electrocatalysts for hydrogen and oxygen evolution and oxygen reduction reactions. *Green Chemistry* **2020**, *22*, 6967-6980. DOI:[10.1039/D0GC02155E](https://doi.org/10.1039/D0GC02155E)
- (58) Kim, H.; Manriquez, L. C. D.; Islam, M. T.; Chavez, L. A.; Regis, J. E.; Ahsan, M. A.; Noveron, J. C.; Tseng, T.-L. B.; Lin, Y. 3D printing of polyvinylidene fluoride/photopolymer resin blends for piezoelectric pressure sensing application using the stereolithography technique. *MRS Communications* **2019**, *9*, 1115-1123. DOI:[10.1557/mrc.2019.109](https://doi.org/10.1557/mrc.2019.109)
- (57) Islam, M. T.; Sultana, K. A.; Noveron, J. C. Borohydride-free catalytic reduction of organic pollutants by platinum nanoparticles supported on cellulose fibers. *Journal of Molecular Liquids* **2019**, *296*, 111988. DOI:[10.1016/j.molliq.2019.111988](https://doi.org/10.1016/j.molliq.2019.111988)

- (56) Islam, M. T.; Rosales, J. A.; Saenz-Arana, R.; Ghadimi, S. J.; Noveron, J. C. Rapid synthesis of ultrasmall platinum nanoparticles supported on macroporous cellulose fibers for catalysis. *Nanoscale Advances* **2019**, *1*, 2953-2964. DOI:[10.1039/C9NA00124G](https://doi.org/10.1039/C9NA00124G)
- (55) Islam, M. T.; Rosales, J.; Saenz-Arana, R.; Arrieta, R.; Kim, H.; Sultana, K. A.; Lin, Y.; Villagran, D.; Noveron, J. C. Synthesis of high surface area transition metal sponges and their catalytic properties. *New Journal of Chemistry* **2019**, *43*, 10045-10055. DOI:[10.1039/C9NJ02096A](https://doi.org/10.1039/C9NJ02096A)
- (54) Islam, M. T.; Hyder, A. G.; Saenz-Arana, R.; Hernandez, C.; Guinto, T.; Ahsan, M. A.; Alvarado-Tenorio, B.; Noveron, J. C. Removal of methylene blue and tetracycline from water using peanut shell derived adsorbent prepared by sulfuric acid flux. *Journal of Environmental Chemical Engineering* **2019**, *7*, 102816. DOI:[10.1016/j.jece.2018.102816](https://doi.org/10.1016/j.jece.2018.102816)
- (53) Islam, M. T.; Dominguez, A.; Alvarado-Tenorio, B.; Bernal, R. A.; Montes, M. O.; Noveron, J. C. Sucrose-Mediated Fast Synthesis of Zinc Oxide Nanoparticles for the Photocatalytic Degradation of Organic Pollutants in Water. *ACS Omega* **2019**, *4*, 6560-6572. DOI:[10.1021/acsomega.9b00023](https://doi.org/10.1021/acsomega.9b00023)
- (52) Barrera, L. A.; Escobosa, A. C.; Nevarez, A.; Dominguez, N.; Bañuelos, J. L.; Westerhoff, P.; Noveron, J. C. TiO₂-carbon nanoporous composites prepared via ZnO nanoparticle-templated carbonization of glucose adsorb and photodegrade organic pollutants in water. *Journal of Water Process Engineering* **2019**, *28*, 331-338. DOI:[10.1016/j.jwpe.2019.02.007](https://doi.org/10.1016/j.jwpe.2019.02.007)
- (51) Ahsan, M. A.; Jabbari, V.; El-Gendy, A. A.; Curry, M. L.; Noveron, J. C. Ultrafast catalytic reduction of environmental pollutants in water via MOF-derived magnetic Ni and Cu nanoparticles encapsulated in porous carbon. *Applied Surface Science* **2019**, *497*, 143608. DOI:[10.1016/j.apsusc.2019.143608](https://doi.org/10.1016/j.apsusc.2019.143608)
- (50) Ahsan, M. A.; Fernandez-Delgado, O.; Deemer, E.; Wang, H.; El-Gendy, A. A.; Curry, M. L.; Noveron, J. C. Carbonization of Co-BDC MOF results in magnetic C@Co nanoparticles that catalyze the reduction of methyl orange and 4-nitrophenol in water. *Journal of Molecular Liquids* **2019**, *290*, 111059. DOI:[10.1016/j.molliq.2019.111059](https://doi.org/10.1016/j.molliq.2019.111059)
- (49) Ahsan, M. A.; Deemer, E.; Fernandez-Delgado, O.; Wang, H.; Curry, M. L.; El-Gendy, A. A.; Noveron, J. C. Fe nanoparticles encapsulated in MOF-derived carbon for the reduction of 4-nitrophenol and methyl orange in water. *Catalysis Communications* **2019**, *130*, 105753. DOI:[10.1016/j.catcom.2019.105753](https://doi.org/10.1016/j.catcom.2019.105753)
- (48) Pardo, A.; Garcia, H.; Ramirez, P.; Carrillo-Alvarado, M. A.; Krishna, K. S.; Dominguez, N.; Islam, M. T.; Wang, H.; Noveron, J. C. Self-regenerating photocatalytic hydrogel for the adsorption and decomposition of methylene blue and antibiotics in water. *Environmental technology & innovation* **2018**, *11*, 321-327. DOI:[10.1016/j.eti.2018.06.005](https://doi.org/10.1016/j.eti.2018.06.005)
- (47) Islam, M. T.; Saenz-Arana, R.; Wang, H.; Bernal, R.; Noveron, J. C. Green synthesis of gold, silver, platinum, and palladium nanoparticles reduced and stabilized by sodium rhodizonate and their catalytic reduction of 4-nitrophenol and methyl orange. *New Journal of Chemistry* **2018**, *42*, 6472-6478. DOI:[10.1039/C8NJ01223G](https://doi.org/10.1039/C8NJ01223G)
- (46) Islam, M. T.; Saenz-Arana, R.; Hernandez, C.; Guinto, T.; Ahsan, M. A.; Kim, H.; Lin, Y.; Alvarado-Tenorio, B.; Noveron, J. C. Adsorption of methylene blue and tetracycline onto biomass-based material prepared by sulfuric acid reflux. *RSC advances* **2018**, *8*, 32545-32557. DOI:[10.1039/C8RA05395B](https://doi.org/10.1039/C8RA05395B)
- (45) Islam, M. T.; Saenz-Arana, R.; Hernandez, C.; Guinto, T.; Ahsan, M. A.; Bragg, D. T.; Wang, H.; Alvarado-Tenorio, B.; Noveron, J. C. Conversion of waste tire rubber into a high-capacity adsorbent for the removal of methylene blue, methyl orange, and tetracycline from water. *Journal of Environmental Chemical Engineering* **2018**, *6*, 3070-3082. DOI:[10.1016/j.jece.2018.04.058](https://doi.org/10.1016/j.jece.2018.04.058)
- (44) Islam, M. T.; Jing, H.; Yang, T.; Zubia, E.; Goos, A. G.; Bernal, R. A.; Botez, C. E.; Narayan, M.; Chan, C. K.; Noveron, J. C. Fullerene stabilized gold nanoparticles supported on titanium dioxide for enhanced photocatalytic degradation

- of methyl orange and catalytic reduction of 4-nitrophenol. *Journal of environmental chemical engineering* **2018**, *6*, 3827-3836. DOI:[10.1016/j.jece.2018.05.032](https://doi.org/10.1016/j.jece.2018.05.032)
- (43) Dominguez, N.; Torres, B.; Barrera, L. A.; Rincon, J. E.; Lin, Y.; Chianelli, R. R.; Ahsan, M. A.; Noveron, J. C. Bimetallic CoMoS composite anchored to biocarbon fibers as a high-capacity anode for Li-ion batteries. *ACS omega* **2018**, *3*, 10243-10249. DOI:[10.1021/acsomega.8b00654](https://doi.org/10.1021/acsomega.8b00654)
- (42) Barrera, L. A.; Escobosa, A. C.; Alsaihati, L. S.; Noveron, J. C. Conducting a Low-Waste Iodine Clock Experiment on Filter Paper To Discern the Rate Law. *Journal of Chemical Education* **2018**, *96*, 165-168. DOI:[10.1021/acs.jchemed.8b00458](https://doi.org/10.1021/acs.jchemed.8b00458)
- (41) Arroyo, I. Z.; Gomez, C.; Alarcon, H.; Jimenez, A.; Pardo, A.; Montano, G.; Armijos, R. X.; Noveron, J. C. Alkyl Length Effects on the DNA Transport Properties of Cu (II) and Zn(II) Metallovesicles: An In Vitro and In Vivo Study. *J Drug Deliv* **2018**, *2018*, 2851579. DOI:[10.1155/2018/2851579](https://doi.org/10.1155/2018/2851579)
- (40) Ahsan, M. A.; Jabbari, V.; Islam, M. T.; Kim, H.; Hernandez-Viezcas, J. A.; Lin, Y.; Díaz-Moreno, C. A.; Lopez, J.; Gardea-Torresdey, J.; Noveron, J. C. Green synthesis of a highly efficient biosorbent for organic, pharmaceutical, and heavy metal pollutants removal: Engineering surface chemistry of polymeric biomass of spent coffee waste. *Journal of Water Process Engineering* **2018**, *25*, 309-319. DOI:[10.1016/j.jwpe.2018.08.005](https://doi.org/10.1016/j.jwpe.2018.08.005)
- (39) Ahsan, M. A.; Islam, M. T.; Imam, M. A.; Hyder, A. G.; Jabbari, V.; Dominguez, N.; Noveron, J. C. Biosorption of bisphenol A and sulfamethoxazole from water using sulfonated coffee waste: Isotherm, kinetic and thermodynamic studies. *Journal of environmental chemical engineering* **2018**, *6*, 6602-6611. DOI:[10.1016/j.jece.2018.10.004](https://doi.org/10.1016/j.jece.2018.10.004)
- (38) Ahsan, M. A.; Islam, M. T.; Hernandez, C.; Kim, H.; Lin, Y.; Curry, M. L.; Gardea-Torresdey, J.; Noveron, J. C. Adsorptive removal of sulfamethoxazole and bisphenol A from contaminated water using functionalized carbonaceous material derived from tea leaves. *Journal of environmental chemical engineering* **2018**, *6*, 4215-4225. DOI:[10.1016/j.jece.2018.06.022](https://doi.org/10.1016/j.jece.2018.06.022)
- (37) Ahsan, M. A.; Islam, M. T.; Hernandez, C.; Castro, E.; Katla, S. K.; Kim, H.; Lin, Y.; Curry, M. L.; Gardea-Torresdey, J.; Noveron, J. C. Biomass conversion of saw dust to a functionalized carbonaceous materials for the removal of Tetracycline, Sulfamethoxazole and Bisphenol A from water. *Journal of environmental chemical engineering* **2018**, *6*, 4329-4338. DOI:[10.1016/j.jece.2018.06.040](https://doi.org/10.1016/j.jece.2018.06.040)
- (36) Padilla, J.; Melendez, J.; Barrera, L.A.; Wu, Y.; Ventura, K.; M. Veleta, J.; Islam, Md; A. Chavez, C.; Sai, K.K.; Villagran, D.; Noveron, J.C. High dispersions of carbon nanotubes on cotton-cellulose benzoate fibers with enhanced electrochemical generation of reactive oxygen species in water. *J. Environ. Chem. Eng.*, **2018**, *6*, 1027 - 1032. DOI:[10.1016/j.jece.2017.12.02](https://doi.org/10.1016/j.jece.2017.12.02)
- (35) Islam, M.T.; Hernandez, C.; Ahsan, M.A.; Pardo, A.; Wang, H.; Noveron, J.C. Sulfonated resorcinol- formaldehyde microspheres as high-capacity regenerable adsorbent for the removal of organic dyes from water. *J. Environ. Chem. Eng.*, **2017**, *5*, 5270 - 5279. DOI:[10.1016/j.jece.2017.10.003](https://doi.org/10.1016/j.jece.2017.10.003)
- (34) Islam, M. T., Dominguez, N., Ahsan, Md A., Dominguez-Cisneros, H., Noveron, J.C. Sodium rhodizonate induced formation of gold nanoparticles supported on cellulose fibers for catalytic reduction of 4-nitrophenol and organic dyes. *J. Environ. Chem. Eng.*, **2017**, *5*, 4185 - 4193. DOI:[10.1016/j.jece.2017.08.017](https://doi.org/10.1016/j.jece.2017.08.017)
- (33) Tasnim, N., Nair, B.G., Sai Krishna, K., Kalagara, S., Narayan, M., Noveron, J.C., Joddar, B. *Frontiers in Nano-therapeutics*. Springer, **2017**. ISBN 978-981-10-3283-7
- (32) Hojin K.; Torres, F.; Islam, Md; Md Didarul; A. Chavez, L.; A. Garcia R., Carlos; R. Wilburn, Bethany; M. Stewart, C.; C. Noveron, J.C.; Tseng, B.; Lin, Y. Increased piezoelectric response in functional nanocomposites through multiwall carbon nanotube interface and fused-deposition modeling three-dimensional printing. *Materials Research Society Communications*. **2017**, *7*, 960 - 966. DOI:[10.1557/mrc.2017.126](https://doi.org/10.1557/mrc.2017.126)
- (31) Kim, H.; Shuvo, M. A. I.; Karim, H.; Noveron, J.C.; Tseng, T.; Lin, Y. Synthesis and characterization of CeO₂

- nanoparticles on porous carbon for Li-ion battery. *Materials Research Society Advances*, **2017**, 3299 – 3307. DOI: [10.1557/adv.2017.443](https://doi.org/10.1557/adv.2017.443)
- (30) Kim, H.; Shuvo, M. A. I.; Karim, H.; Nandasiri, M. I.; Schwarz, A.M.; Vijayakumar, A. M. S.; Noveron, J.C.; Tseng, T.; Lin, Y. Porous Carbon/CeO₂ Nanoparticles Hybrid Material for High- Capacity Super-Capacitors. *Materials Research Society Advances*, **2017**, 2471 - 2480. DOI: [10.1557/adv.2017.420](https://doi.org/10.1557/adv.2017.420)
- (29) Pal, S.; Islam, T.; Moore, J.T., Reyes, J.; Pardo, A.; Varela-Ramirez, A.; Noveron, J.C. Self-assembly of a novel Cu(II) coordination complex forms metallo-vesicles that are able to transfect mammalian cells. *New Journal of Chemistry*, **2017**, *41*, 11230 - 11237. DOI:[10.1039/C7NJ02161E](https://doi.org/10.1039/C7NJ02161E)
- (28) Islam, Md. Tariqul, Padilla, J. E. Dominguez, N., Alvarado, D. C., Alam, Md S., Cooke, P., Tecklenburg, M.M. J., Noveron, J.C. Green synthesis of gold nanoparticles reduced and stabilized by squaric acid and supported on cellulose fibers for the catalytic reduction of 4- nitrophenol in water. *Royal Society of Chemistry Advances*, **2016**, *6*, 91185 - 91191. DOI:[10.1039/C6RA17480A](https://doi.org/10.1039/C6RA17480A)
- (27) Islam, Md. T., Molugu, S. K.; Cooke, P. H.; Noveron, J.C. Fullerene stabilized gold nanoparticles. *New Journal of Chemistry*, **2015**, *39*, 5923 - 5926. DOI:[10.1039/C5NJ01367D](https://doi.org/10.1039/C5NJ01367D)
- (26) Karin, H.; Shuvo, M. A. I.; Islam, Md T.; Rodriguez, G.; Sandoval, A.; Nandasiri, M.; Schwarz, A.M.; Devaraj, A.; Noveron, J.C.; Lin, Y. Porous carbon/CeO₂ composites for Li-ion battery application. *Smart Materials and Nondestructive Evaluation for Energy Systems Proc. SPIE 9439*, **2015**, 94390I-1 - 94390I-6. DOI:[10.1117/12.2084293](https://doi.org/10.1117/12.2084293)
- (25) Karin, H.; Shuvo, M. A. I.; Islam, Md T.; Rodriguez, G.; Sandoval, A.; Nandasiri, M.; Schwarz, A.M.; Devaraj, A.; Noveron, J.C.; Lin, Y. High-performance Porous Carbon/CeO₂ Nanoparticles Hybrid Super-capacitors for Energy Storage. *Smart Materials and Nondestructive Evaluation for Energy Systems, Proc. SPIE 9439*, **2015**, 94390H1 - 94390H8. DOI:[10.1117/12.2084267](https://doi.org/10.1117/12.2084267)
- (24) Shuvo, M. A. I.; Rodriguez, G.; Islam, Md T.; Karim, H.; Ramabadran, N.; Noveron, J.; Lin, Y. Microwave exfoliated graphene oxide/TiO₂ nanowire hybrid for high performance lithium ion battery. *Journal of Applied Physics*, **2015**, *118*, 125102-1 - 125102-5. DOI: 10.1063/1.4931380
- (23) Bugarin, A.; Martinez, L.;Cooke, P.; Islam, T.; Noveron, J. Solid-phase organic synthesis of 2- tridecanyl-1,4-naphthoquinone and 2-tridecanyl-1,4-naphthodiol that form redox-active micelles and vesicles. *Bioorganic Chemistry*, **2014**, *56*, 62 - 66. DOI:[10.1016/j.bioorg.2014.06.005](https://doi.org/10.1016/j.bioorg.2014.06.005)
- (22) Padilla, J.; Calderon, F.J.; Acosta-Martinez, V.; Pelt, S.V.; Gardner, T.; Baddock, M.; Zobeck, T.M.; Noveron, J.C. Diffuse-reflectance mid-infrared spectroscopy reveals chemical differences in soil organic matter carried in different size wind eroded sediments. *Aeolian Research*, **2014**, *15*, 193 – 201. DOI:[10.1016/j.aeolia.2014.06.003](https://doi.org/10.1016/j.aeolia.2014.06.003)
- (21) Pietraß, T., Campa- Cruz, I., Kombarakkaran, J., Suman, S. Atta, A.M.; Noveron, J. Hydrogen Physisorption in Cu(II) Metallacycles. *Journal of Physical Chemistry C*, **2010**, *114*, 21371 - 2137. DOI:[10.1021/jp104544r](https://doi.org/10.1021/jp104544r)
- (20) Summers, D.; Noveron J.C.; Basa, R.C Energy Transduction Inside Vesicles by Mineral Particles: Formation of NADH ASC, **2010** No. 1538, 5596. DOI: [2010LPICo1538.5596S](https://doi.org/2010LPICo1538.5596S)
- (19) Kombarakkaran, J.; Helgesen, M.; Shen, K.; Pietraß, T.; Noveron, J.C. Hydrogen Storage in Dinuclear Pt(II) Metallacycles. *International Journal of Hydrogen Energy*, **2009**, *34*, 5704 – 5709. DOI:[10.1016/j.ijhydene.2009.05.018](https://doi.org/10.1016/j.ijhydene.2009.05.018)
- (18) Summers, D.; Noveron J.C.; Basa, R.C Energy Transduction Inside of Amphiphilic Vesicles. *Origins of Life and Evolution of Biospheres*, **2009**; *39*, 127 – 140. DOI: [10.1007/s11084-009-9160-y](https://doi.org/10.1007/s11084-009-9160-y)
- (17) Porta, B.; Khamsi, J.; Noveron, J.C. Metallomesogens: Supramolecular Design via Alkyl-rich Metal Complexes. *Current Org Chem*, **2008**, *12*, 1298 - 1321. DOI:[10.2174/138527208785909565](https://doi.org/10.2174/138527208785909565)
- (16) Mukherjee, Partha S.; Lopez, N. Arif, A. M.; Cervantes-Lee, F.; Noveron J.C. Single-crystal to single-crystal phase transitions of bis(*N*-phenylisonicotinamide) silver(I) nitrate reveal cooperativity properties in porous molecular materials. *Chemical Communications*, **2007**, 1433 - 1435. DOI: [10.1039/B616502H](https://doi.org/10.1039/B616502H)

- (15) Campa-Cruz, I.; Arzola, A.; Santiago, L.; Parson, J. G.; Varela-Ramirez, A.; Aguilera, R.; Noveron J.C. A novel class of metal-directed supramolecular DNA-delivery systems. *Chemical Communications*, **2007**, 2944 -2946. DOI: [10.1039/B703201C](https://doi.org/10.1039/B703201C)
- (14) Lopez, N.; Vos, T. E.; Arif, A. M.; Miller, J. S.; Noveron, J.C. Structure and Magnetic Properties of a Hydroxo-Bridged Copper(II) Distorted Cubane Stabilized via Supramolecular Hydrogen Bonding with an Ionic Hexafluoroacetylacetonate. *Inorg Chem*, **2006**; *45*, 4325 - 4327. DOI:[10.1021/ic060167e](https://doi.org/10.1021/ic060167e)
- (13) Chatterjee, B.; Noveron, J.C.; Resendiz, M.; Parker, D.; Cinke, M.; Nguyen, C. V.; Stang, P. J. Self-Assembly of Flexible Supramolecular Metallacyclic Ensembles: Structure and Sorption Properties of Their Nanoporous Crystalline Frameworks. *Journal of the American Chemical Society*, **2004**, *126*, 10645 - 10656. DOI: [10.1021/ja0388919](https://doi.org/10.1021/ja0388919)
- (12) Resendiz, M.; Noveron, J. C.; Stang, P. J. A Self-assembled Supramolecular Optical Sensor for Ni(II), Cr(II), and Cd(II). *Organic Letters*, **2003**; *6*, 651 - 653. DOI: [10.1021/ol035587b](https://doi.org/10.1021/ol035587b)
- (11) Noveron, J.C.; Chatterjee, B.; Arif, A. M.; Stang, P. J. Thermally stable porous supramolecular frameworks based on the metal and π - π stacking directed self-assembly of 2,6-pyridyldicarboxylic acid bis-4-pyridylamide *Journal of Physical Organic Chemistry*, **2003**; *16*, 420 - 425. DOI:[10.1002/poc.604](https://doi.org/10.1002/poc.604)
- (10) Noveron, J.C.; Chatterjee, B.; Arif, A. M.; Stang, P. J. Optical Sensing of Small Hydroxyl-Containing Molecules in New Crystalline Lamellar Arrays of Co(II) and N-(4-Pyridyl)benzamide. *Chemistry of Materials*, **2003**; *15*, 372 – 374. DOI:[10.1021/cm025643n](https://doi.org/10.1021/cm025643n)
- (9) Tyler, L. A.; Noveron, J. C.; Olmstead, M. M.; Mascharak, P. K. Modulation of the pKa of Metal-Bound Water via Oxidation of Thiolato Sulfur in Model Complexes of Co(III) Containing Nitrile Hydratase: Insight into Possible Effect of Cysteine Oxidation in Co-Nitrile Hydratase. *Inorganic Chemistry*, **2003**; *42*, 5751 - 5761. DOI:[10.1021/ic030088s](https://doi.org/10.1021/ic030088s)
- (8) Noveron, J.C.; Lah, M. S.; Del Sesto, R. E.; Arif, A. M.; Miller, J. S.; Stang, P. J. Engineering the Structure and Magnetic Properties of Crystalline Solids via the MetalDirected Self-Assembly of a Versatile Molecular Building Unit. *Journal of the American Chemical Society*, **2002**; *124*, 6613 - 6625. DOI: [10.1021/ja0200241](https://doi.org/10.1021/ja0200241)
- (7) Noveron, J.C.; Olmstead, M. M.; Mascharak, P. K. A Synthetic Analogue of the Active Site of Fe-containing Nitrile Hydratase with Carboxamido N and Thiolato S as Donors: Synthesis, Structure, and Reactivities. *Journal of the American Chemical Society*, **2001**; *123*, 3247 - 3247. DOI:[10.1021/ja001253v](https://doi.org/10.1021/ja001253v)
- (6) Noveron, J.C.; Mascharak, P. K. A Functional Model of the O-O Bond Formation by the Oxygen Evolving Complex in Photosystem II. *Chemtracs Inorganic Chemistry*, **2000**; *13*, 326 - 330. [CCC 1431-9268](https://doi.org/10.1021/ccc1431-9268)
- (5) Tyler, L. A.; Noveron, J. C.; Olmstead, M. M.; Mascharak, P. K. Co(III) Complexes with Coordinated Carboxamido Nitrogens and Thiolato Sulfurs as Models for Co-Containing Nitrile Hydratase and Their Conversion to the Corresponding Sulfinato Species *Inorganic Chemistry*, **2000**; *39*, 357 - 362. DOI:[10.1021/ic990794m](https://doi.org/10.1021/ic990794m)
- (4) Noveron, J.C.; Olmstead, M. M.; Mascharak, P. K. Co(III) Complexes with Carboxamido N and Thiolato S Donor Centers: Models for the Active Site of Co-Containing Nitrile Hydratases. *Journal of the American Chemical Society*, **1999**; *121*, 3553 - 3554. DOI: [10.1021/ja9833523](https://doi.org/10.1021/ja9833523)
- (3) Tyler, L. A.; Noveron, J. C.; Olmstead, M. M.; Mascharak, P. K. Oxidation of Metal-Bound Thiolato Sulfur Centers in Fe(III) and Co(III) Complexes with Carboxamido Nitrogens and Thiolato Sulfurs as Donors: Relevance to the Active Sites of Nitrile Hydratases. *Inorganic Chemistry*, **1999**; *38*, 616 – 617. DOI:[10.1021/ic980884b](https://doi.org/10.1021/ic980884b)
- (2) Noveron, J. C.; Herradora, R.; Olmstead M. M.; Mascharak, P. K. Low-spin iron(III) complexes with N,S coordination: syntheses, structures, and properties of bis(N-2-mercaptophenyl-2'-pyridylmethyleneiminato)iron(III) tetraphenylborate and bis(N-2-mercapto-2-methylpropyl-2'-pyridylmethyleneiminato)iron(III) tetraphenylborate. *Inorganic Chimica Acta*, **1999**; *285*, 269 - 276. DOI: [10.1016/S0020-1693\(98\)00354-5](https://doi.org/10.1016/S0020-1693(98)00354-5)
- (1) Noveron, J.C.; Olmstead, M. M.; Mascharak, P. K. Effect of Carboxamido N Coordination to Iron on the Redox Potential of Low-Spin Non-Heme Iron Centers with N,S Coordination: Relevance to the Iron Site of Nitrile Hydratase. *Inorganic Chemistry*, **1998**; *37*, 1138 - 1139. DOI:[10.1021/ic971388a](https://doi.org/10.1021/ic971388a)

Patents

- US Patent 16/690,820, **2020**, Photoresponsive polymer coated optical fibers for water treatment, PK Westerhoff, S Sinha, J Noveron
- US Patent 15/408,014 **2017**, Rapid Gene-sensor from Carbon Nanotubes and DNA. Noveron, J.C., Alarcon, H.
- US Patent 15/407,909 **2016**, Materials with Water-triggered Drug-release Properties. Noveron, J.C., Bahadorzadeh, S.

Synergistic Activities

- UT System Appointment - Life Fellow of the UT System Academy of Distinguished Teachers
- Co-director of the Peer-led Team Learning Program at UTEP
- Committees and Advisory Boards:
 - Member of the Intellectual Property Committee for the University of Texas at El Paso
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Julio Padilla, Chemistry, 2016
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Brenda Porta, Chemistry, 2011
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