

Conn Center for Renewable Energy Research
Impact Report 2010 - 2020
PhD & Masters Degrees

AM Rev. 6/2022

			TOTAL PhDs	126	TOTAL Masters	56		
#	Year	Dissertation/Thesis Title	Last Name	First Name	Department	Degree	Committee Chair	Committee member
1	2009	Preliminary investigation into single stage enzyme free hydrolysis of hardwood sawdust	Dunaway	Kyle William	Chemical Engineering	M.Eng.	Eric Berson	N/A
2	2009	Saccharification of Concentrated Biomass Slurries in a Resonating Acoustic Mixer	Rezania	Samir	Chemical Engineering	Ph.D.	Eric Berson	
3	2009	Electrochemically mediated charge transfer effects on single-walled carbon nanotubes	Abeyweera	Buddika KA.	Physics	M.S.	Gamini Sumanasekera	Shi Yu Wu
4	2009	Surface modifications of 1-D nanostructures and their effect on adsorption/desorption properties (chemical sensors)	Desai	Shervil	Physics	Ph.D.	Gamini Sumanasekera	N/A
5	2009	Novel techniques to produce and deposit n-layer graphene: Their physical properties	Sidorov	Anton	Physics	Ph.D.	Gamini Sumanasekera	N/A
6	2009	Viability for oxidation of H ₂ S gas using low concentration solutions of H ₂ O ₂ peroxide in applications for biogas purification	McCollam	Stewart Walter	Chemical Engineering	M.Eng.	Gerold Willing	N/A
7	2009	Physical effects of the respiratory syncytial virus on human cells	Pfendt	Adam	Chemical Engineering	M.Eng.	Gerold Willing	N/A
8	2009	Direct Force Measurements for Silica Plate System and Nanoparticle Suspensions	Hong	Xiatong	Chemical Engineering	Ph.D.	Gerold Willing	
9	2009	Development of an integrated solar heat pipe system for improving building energy efficiency	Albanese	Michael Vincent	Mechanical Engineering	M.Eng.	Keith Sharp	Ellen Brehob
10	2009	Design, construction, and experimentation of a heat pipe augmented solar wall	Chmielewski	Nicholas E.	Mechanical Engineering	M.Eng.	Keith Sharp	N/A
11	2009	Comparison of α-Fe ₂ O ₃ electrodes grown by direct plasma and thermal oxidation of iron for photoelectrochemical water splitting	Chernomordik	Boris David	Chemical Engineering	M.Eng.	Mahendra Sunkara	N/A
12	2009	Synthesis of Molybdenum oxide nanowires and their facile conversion to Molybdenum sulfide	Cummins	Dustin Ray	Chemical Engineering	M.Eng.	Mahendra Sunkara	N/A
13	2009	The engineering of optical filters from inorganic-organic nanocomposites	Druffel	Theodore	Chemical Engineering	Ph.D.	Mahendra Sunkara	N/A
14	2010	Enzyme-substrate interaction significantly affects activity loss during enzymatic hydrolysis of cellulose	Hatfield	Kristen M.	Chemical Engineering	M.Eng.	Eric Berson	N/A

15	2010	Size and composition dependent electrochemical oxidation and deposition of metal nanostructures	Ivanova	Olga	Chemistry	Ph.D.	Francis Zamborini	N/A
16	2010	The localized surface plasmon resonance (LSPR) response of gold and gold/silver metal nanostructures to protein binding and global refractive index changes	Reddy Beeram	Srinivas	Chemistry	Ph.D.	Francis Zamborini	N/A
17	2010	The electrochemical synthesis, chemical synthesis, and galvanic exchange of silver nanostructures directly on surfaces	Slawinski	Grzegorz	Chemistry	Ph.D.	Francis Zamborini	
18	2010	Synthesis of a directionally-conductive polyaniline hydrogel composite by vapor deposition	Reed	Eric W.	Chemical Engineering	M.Eng.	Gerold Willing	
19	2010	Nanowire based materials and architectures as anodes for LI-ION batteries	Meduri	Praveen	Chemical Engineering	Ph.D.	Mahendra Sunkara	
20	2010	Phase transformation studies within one-dimensional metal oxide nanowires	Thangala	Jyothish	Chemical Engineering	Ph.D.	Mahendra Sunkara	
21	2010	Electron emission from nanostructured materials	Safir	Abdellah	Electrical and Computer Engineering	Ph.D.	Robert Cohn	
22	2010	Synthesis and characterization of ceria nanomaterials	Ng	Nitzia Cheong	Chemical Engineering	M.Eng.	Xiao An-Fu	
23	2010	Simulation and fabrication of microhotplates for metal oxide gas sensors	Miller	Kane Jonathan	Chemical Engineering	M.Eng.	Xiao An-Fu	
24	2010	Numerical simulation of a flat back airfoil for wind turbine applications	Fuller	Matthew	Mechanical Engineering	M.Eng.	Yongsheng Lian	
25	2011	Measurement of the electronic density of states of graphene oxide using capacitive photocurrent spectroscopy	Bansal	Tanesh	Electrical and Computer Engineering	Ph.D.	Bruce Alphenaar	
26	2011	CFD modeling of center cones, vortex breakers and pressure relief slits in a wind speed accelerator	Lucas	Michael D.	Chemical Engineering	M.Eng.	Eric Berson	
27	2011	Hydrolysis of concentrated dilute base pretreated biomass slurries	Brockmann	Gregory A.	Chemical Engineering	M.Eng.	Eric Berson	
28	2011	CFD modeling of entrance and exit geometries of a wind speed accelerator	Russ	David	Chemical Engineering	M.Eng.	Eric Berson	Gerold Willing
29	2011	Rapid functionalization of gold monolayer protected clusters for fabricating electronic noses	Yang	Yang	Chemistry	M.S.	Francis Zamborini	
30	2011	Electrochemically-fabricated metal nanostructures for sensing, resistive switching, Raman enhancement, and making contact to molecular junctions	Dasari	Radhika	Chemistry	Ph.D.	Francis Zamborini	
31	2011	Heat transfer measurement in oil-based nanofluids	Liu	Kan	Chemical Engineering	Ph.D.	Gerold Willing	
32	2011	Optimal charging scheduling for battery electric vehicles under smart grid	Rahman	Nur Dayana Abd	Industrial Engineering	M.S.	Lihui Bai	Gerald Evans
33	2011	Metal organic chemical vapor deposition of InGaN alloys on nanowire substrates	Pendyala	Chandrasekhar	Chemical Engineering	Ph.D.	Mahendra Sunkara	

34	2011	Characterization of hematite nanowire arrays synthesized by atmospheric plasma	Russell	Harry Benjamin	Chemical Engineering	M.Eng.	Mahendra Sunkara
35	2011	Novel catalyst for the removal of aromatic sulfur species from refinery streams	Petzold	Franz Georg	Chemical Engineering	M.Eng.	Mahendra Sunkara
36	2011	Novel scalable manufacturing techniques for metal oxide nanowire powders and arrays	Kumar	Vivekanand	Chemical Engineering	Ph.D.	Mahendra Sunkara
37	2011	Optimal charging scheduling for battery electric vehicles under smart grid	Rahman	Nur Dayana Abd	Electrical and Computer Engineering	M.S.	Michael McIntyre
38	2011	Molecular Engineering Design of the SAPO-34 and ZIF-8 Membranes for CO ₂ Separation from CH ₄ and N ₂	Venna	Surendar	Chemical Engineering	Ph.D.	Moises Carreon
39	2011	Rational Design of Mesoporous Gallium Oxide and Gallium Based Mixed Oxide Catalysts	Deshmane	Chinmay	Chemical Engineering	Ph.D.	Moises Carreon
40	2011	Application of microfabrication in electrochemical sensing	Carroll	Susan	Chemistry	Ph.D.	Richard Baldwin
41	2011	Rational design, synthesis and characterization of amide functionalized pyridine and benzimidazole transition metal complexes	Asem	Samuel S. K.	Chemistry	Ph.D.	Robert Buchanan
42	2011	Thermal analysis of lead zirconate titanate thin films using digital image correlation	Meuris	Brek J.	Mechanical Engineering	M.Eng.	Thomas Berfield
43	2011	Die separation strength for deep reactive ion etched wafers	Porter	Daniel Allen	Mechanical Engineering	M.Eng.	Thomas Berfield
44	2012	Exciton generation and dissociation mechanisms in organic bulk heterojunction solar cell materials	Shah	Hemant	Electrical and Computer Engineering	Ph.D.	Bruce Alphenaar
45	2012	Carbon nanomaterial based vapor sensors	Kona	Silpa	Electrical and Computer Engineering	Ph.D.	Cindy Harnett
46	2012	Incorporating nanomaterials with MEMS devices	Moiseeva	Evgeniya V.	Electrical and Computer Engineering	Ph.D.	Cindy Harnett
47	2012	Driving microfluidic flows with three dimensional electrodes	Senousy	Yehya Mohamed	Electrical and Computer Engineering	Ph.D.	Cindy Harnett
48	2012	Sulfur oxygenation of ruthenium-dithiolate nitrile hydratase mimic enhances ligand lability and hydrolysis activity	Castillo	Cesar Antonio Masitas	Chemistry	Ph.D.	Craig Grapperhaus
49	2012	Carbon-sulfur bond formation/cleavage reactions of metal-stabilized thyl radicals by electrochemical and chemical methods	Ouch-Sampson	Kagna	Chemistry	Ph.D.	Craig Grapperhaus
50	2012	The Impact of Adsorbed Cellulase Deactivation on Enzymatic Hydrolysis Kinetics	Ye	Zhouliang	Chemical Engineering	Ph.D.	Eric Berson
51	2012	Size- and shape-dependent electrochemistry of gold nanoparticles	Khachian	Irina V.	Chemistry	M.S.	Francis Zamborini
52	2012	Proposal to modify the mixing system for hydrosolution's processing plant	Hanley	Alan Michael	Chemical Engineering	M.Eng.	Gerold Willing

53	2012	Development of a hydrogel/polypyrrole interpenetrating network for a potential application as an artificial cardiac muscle	Lee	James J.	Chemical Engineering	Ph.D.	Gerold Willing	
54	2012	The use and effects of ecofriendly surfactants in the meat rendering industry in the United States	Arnold	Pamela	Chemical Engineering	M.Eng.	Gerold Willing	
55	2012	Integrated modeling and analysis methodologies for architecture-level vehicle design	Lesiv	Rostyslav	Mechanical Engineering	Ph.D.	Glen Prater	
56	2012	Nanoscale diamond and carbon materials and architectures for field emission and thermionic energy conversion	Dumpala	Santoshrupa	Chemical Engineering	Ph.D.	Mahendra Sunkara	
57	2012	Vehicle to grid as a household emergency generator for 2007 Toyota Prius plug-in hybrid electric vehicle	Schoen	Michael	Electrical and Computer Engineering	M.Eng.	Michael McIntyre	
58	2012	Maximum power point tracker for solar arrays using controlled rectifier	Manadan	Anvin Joe	Electrical and Computer Engineering	M.S.	Michael McIntyre	
59	2012	Thermally driven Knudsen gas pump enhanced with a thermoelectric material	Pharas	Kunal	Electrical and Computer Engineering	Ph.D.	Shamus McNamara	
60	2012	Tuning the bandgap of an amorphous sputtered germanium photovoltaic cell	Staebler	Bryon	Chemical Engineering	M.Eng.	Xiao An-Fu	
61	2012	Numerical simulation of phase change material composite wallboard in a multi-layered building envelope	Zwanzig	Stephen David	Mechanical Engineering	M.Eng.	Yongsheng Lian	
62	2013	Charge collection and surface recombination effects in organic bulk heterojunction solar cells.	Abeyweera	Budhika	Electrical and Computer Engineering	Ph.D.	Bruce Alphenaar	Gamini Sumanasekera
63	2013	Hydrogen (H ₂) sensing and catalysis with organic-stabilized Pd and Pd alloy nanoparticles	Moreno Ruano	Monica	Chemistry	Ph.D.	Francis Zamborini	
64	2013	In-situ monitoring of transport properties of graphene during plasma functionalization and its applications in energy storage	Ruwantha	Jayasinghe	Physics	Ph.D.	Gamini Sumanasekera	
65	2013	Identification of carbon black removed from elastomeric components in contact with potable water	Hunter	William Calvin	Chemical Engineering	M.Eng.	Gerold Willing	
66	2013	Optimal scheduling for charging electric vehicles with fixed setup costs	Xu	Guangyang	Industrial Engineering	M.S.	Lihui Bai	
67	2013	ZIF-8 Novel Catalytic Materials for CO ₂ to Cyclic Carbonates	Zhu	Minqui	Chemical Engineering	Ph.D.	Moises Carreon	
68	2013	A semi-empirical Hamiltonian for boron, phosphorus and compounds containing boron, phosphorus and silicon	Tandy	Paul S.	Physics	Ph.D.	Shi-Yu Wu	Chakram Jayanthi
69	2013	Mechanical characterization of MEMS bi-stable buckled diaphragms	Phelps	Isaac James	Mechanical Engineering	M.Eng.	Thomas Berfield	
70	2013	Development of concrete incorporating phase change materials for enhanced energy efficiency	Kiesel	Jeffrey Dee	Civil Engineering	Ph.D.	William McGinley	
71	2014	Photomechanical actuation of liquid crystal nanotube elastomers	Fan	Xiaoming	Mechanical Engineering	M.S.	Balaji Panchapakesan	Robert Cohn

72	2014	Investigation of transmission loss through double wall structures with varying small air gaps using modal analysis	Phillips	Richard Michael	Mechanical Engineering	M.S.	Christopher Richards	Kevin Murphy
73	2014	Development of a light-powered microstructure : enhancing thermal actuation with near-infrared absorbent gold nanoparticles	Lucas	Thomas Matthew	Electrical and Computer Engineering	Ph.D.	Cindy Harnett	
74	2014	Ligand centered reactivity of metal stabilized thiyl radicals in solution, solid and gaseous phase.	Chauhan (Rajat)	Rajat	Chemistry	Ph.D.	Craig Grapperhaus	Mark Noble
75	2014	Synthesis of cadmium selenide quantum dots for fabrication of hybrid light emitting diodes	McCreary	Michael	Chemical Engineering	M.Eng.	Delaina Amos	
76	2014	Transient heat transfer between a magnetocaloric packed particle bed and stagnant interstitial fluid	Schroeder	Michael G.	Mechanical Engineering	M.S.	Ellen Brehob	Sam Park
77	2014	Enhancement of Anaerobic Digestion of Actual Industrial Wastewaters: Reactor Stability and Kinetic Modeling	Ghorbanian	Mahyar	Chemical Engineering	Ph.D.	Eric Berson	Jagannadh Satyavolu
78	2014	Thermionic emission properties of novel carbon nanostructures	Sherehiy	Andrey	Physics	Ph.D.	Gamini Sumanasekera	Robert Cohn
79	2014	Development of sulfur cathode material for Li-S batteries	Dharmasena	Ruchira Ravinath	Physics	M.S.	Gamini Sumanasekera	Chakram Jayanthi
80	2014	Investigation of stabilization mechanisms for colloidal suspension using nanoparticles	He	Qingwen	Chemical Engineering	Ph.D.	Gerold Willing	Xiao-An Fu
81	2014	Fabrication of a thin silver nanowire composite film and investigation of a patterning technique	Korte	Richard S.	Chemical Engineering	M.Eng.	Gerold Willing	Xiao-An Fu
82	2014	An investigation of heat transfer enhancement in nanofluids containing core and shell nanoparticles	Milligan	Cory Adam	Chemical Engineering	M.Eng.	Gerold Willing	James Watters
83	2014	Nanofluid enhancement of mineral oil and thermal properties instrument design	Wilborn	Eli	Chemical Engineering	M.Eng.	Gerold Willing	
84	2014	Development of a power monitoring and control system to provide demand side management of electric vehicle charging activity	Jewell	Nicholas Francis	Electrical and Computer Engineering	Ph.D.	John Naber	Michael McIntyre
85	2014	Advancements in alternative energy applications for space conditioning	Robinson	Brian S.	Mechanical Engineering	Ph.D.	Keith Sharp	William Hnat
86	2014	Phase transformation studies of metal oxides to dichalcogenides in 1-d structures	Cummins	Dustin	Chemical Engineering	Ph.D.	Mahendra Sunkara	Delaina Amos
87	2014	Electrochemical and microfabrication strategies for remotely operated heavy metal sensor networks for water analysis : the dual challenges of calibration-less measurement and sample pretreatment	Marei	Mohamed M.	Chemistry	Ph.D.	Richard Baldwin	Robert Keynton
88	2014	Multilayer electret activated by direct contact silicon electrode	Crain	Mark	Electrical and Computer Engineering	Ph.D.	Shamus McNamara	Robert Keynton
89	2014	Nanoporous Bi ₂ Te ₃ thermoelectric based Knudsen gas pump	Faiz	Abderrazzak	Mechanical Engineering	Ph.D.	Shamus McNamara	Ellen Brehob
90	2014	Low power strain sensor based on MOS tunneling current	Zhu	Li	Electrical and Computer Engineering	Ph.D.	Shamus McNamara	Kevin Walsh

91	2014	Experimental investigation on the shear characteristics of GFRP reinforcement systems embedded in concrete	Connor	Austin Beau	Civil Engineering	M.Eng.	Young Hoon Kim	William McGinley
92	2015	Sulfur-oxidation enhances nitrile hydration in bioinspired ruthenium complexes : catalytic, kinetic, and DFT investigations	Kumar	Davinder	Chemistry	Ph.D.	Craig Grapperhaus	Robert Buchanan
93	2015	Nanoscale electrode architectures for electrochemical energy conversion and storage	Vendra	Venkat Kelyan	Chemical Engineering	Ph.D.	Delaina Amos	Mahendra Sunkara
94	2015	Evaluation of two-phase evaporation pressure drop correlations for low refrigerant mass flux	Fenko	Anna	Mechanical Engineering	M.S.	Ellen Brehob	Sam Park
95	2015	Model of a tubular perfusion bioreactor using computational fluid dynamics	Robeson	Matthew James	Chemical Engineering	M.Eng.	Eric Berson	Gerold Willing
96	2015	The unique electrochemical reactivity of small metal nanoparticles	Masitas	Rafael	Chemistry	Ph.D.	Francis Zamborini	Craig Grapperhaus
97	2015	Electrochemical formation of one-dimensional metal nanostructures across microgaps electrodes for resistive switching and optical sensing applications	Shah	Nidhi	Chemistry	Ph.D.	Francis Zamborini	Muriel Maurer
98	2015	Application of surface chemistry at the interface of mesoporous TiO2 films for stable and high efficiency dye-sensitized solar cells	Luitel	Tulashi	Chemistry	Ph.D.	Francis Zamborini	Bruce Alphenaar
99	2015	Optical and sensing properties of various shaped gold nanoplates and highly controlled asymmetric gold nanoplate/nanosphere coupled assemblies	Fang	Aiqin	Chemistry	Ph.D.	Francis Zamborini	
100	2015	A study of the catalytic and chemical properties of palladium and palladium-silver monolayer protected clusters	Hutcherson	Luther Benjamin	Chemistry	M.S.	Francis Zamborini	Richard Baldwin
101	2015	Heat transfer mechanisms in water-based nanofluids	Ahmadi	Masoudeh	Chemical Engineering	Ph.D.	Gerold Willing	James Watters
102	2015	The production, properties and applications of the zinc imidazolate, ZIF-8	Tatarko	John L.	Chemical Engineering	Ph.D.	Gerold Willing	Xiao-An Fu
103	2015	Physical Investigations of Nanomaterials for Lithium-Ion Batteries	Ziolkowska	Dominika	Univeristy of Warsaw	Ph.D.	Jacek Jasinski	
104	2015	Vanadium trichloride thermochemical solar energy storage system analysis	Rogers	Caleb Michael	Mechanical Engineering	M.Eng.	Keith Sharp	Sam Park
105	2015	New visible light absorber for solar fuels : Ga(Sbx)N1-x alloys	Sunkara	Swathi	Chemical Engineering	Ph.D.	Mahendra Sunkara	Thomas Starr
106	2015	Plasma catalysis using low melting point metals	Carreon	Maria	Chemical Engineering	Ph.D.	Mahendra Sunkara	Thomas Starr
107	2015	Performance analysis of a Copper II Sulfate Pentahydrate based thermogalvanic cell	Krebs	Steffen	Mechanical Engineering	M.S.	Sam Park	Ellen Brehob
108	2015	Experimental and analytical study of an open cathode polymer electrolyte membrane fuel cell	Bates	Alex Martin	Mechanical Engineering	M.Eng.	Sam Park	Ellen Brehob
109	2015	Improved self-consistency for SCED-LCAO	Smith	Lyle C.	Mathematics	Ph.D.	Shi-Yu Wu	Chakram Jayanthi

110	2015	Mechanics of electrode materials in lithium battery applications	Chen	Jubin	Mechanical Engineering	Ph.D.	Thomas Berfield	Sam Park
111	2015	Bi-stable buckled energy harvesters actuated via torque arms	Porter	Daniel Allen	Mechanical Engineering	Ph.D.	Thomas Berfield	Roger Bradshaw
112	2015	Assessing the water quality benefits of green infrastructure stormwater control measures	Abdollahian	Sam	Civil Engineering	Ph.D.	Thomas Rockaway	J.P. Mohsen
113	2016	Effect of non-uniform air-side velocity distribution on heat transfer model predictions for microchannel condenser	Chapin	Zachary	Mechanical Engineering	M.S.	Ellen Brehob	Sam Park
114	2016	Mixing and mean age in multiphase systems	Russ	David Chandler	Chemical Engineering	Ph.D.	Eric Berson	Gerold Willing
115	2016	Synthesis, characterization, and electronic properties of novel 2D materials : transition metal dichalcogenides and phosphorene	Anderson	George	Physics	Ph.D.	Gamini Sumanasekera	Chakram Jayanthi
116	2016	The Electropolishing of Electron Beam Melting, Additively Manufactured Ti-6Al-4V Titanium: Relevance, Process Parameters and Surface Finish	Lassell	Austin	Industrial Engineering	M.Eng.	Jacek Jasinski	
117	2016	Strategies and techniques for fabricating MEMS bistable thermal actuators	Ratnayake	Dilan	Mechanical Engineering	Ph.D.	Kevin Walsh	Shamus McNamara
118	2016	An integrated economic equilibrium model for electricity markets	Pothabathula	Swapna	Industrial Engineering	M.S.	Lihui Bai	Ki-Hwan Bae
119	2016	Optimization models and algorithms for demand response in smart grid	Xu	Guangyang	Industrial Engineering	Ph.D.	Lihui Bai	Ki-Hwan Bae
120	2016	Simulation modeling for energy consumption of residential consumers in response to demand side management	Khadiji	Prajwal	Industrial Engineering	Ph.D.	Lihui Bai	Gerald Evans
121	2016	Scalable production and applications of metal oxide nanowires	Nguyen	Tu	Chemical Engineering	Ph.D.	Mahendra Sunkara	Thomas Starr
122	2016	Direct band gap gallium antimonide phosphide (GaSbxP1-x) for solar fuels	Russell	Harry	Chemical Engineering	Ph.D.	Mahendra Sunkara	Xiao-An Fu
123	2016	Materials design and band gap engineering of complex nanostructures using a semi-empirical approach : low dimensional boron nanostructures, h-BN sheet with graphene domains and holey graphene	Kah	Cherno Baba	Physics	Ph.D.	Ming Yu	Chakram Jayanthi
124	2016	Conductive inks and films via intense pulsed light	Draper	Gabriel	Chemical Engineering	Ph.D.	Thad Druffel	Mahendra Sunkara
125	2017	Applications of polarized metallic nanostructures	Beharic	Jasmin	Electrical and Computer Engineering	Ph.D.	Cindy Harnett	
126	2017	Heterogenization of complexes with redox active ligands for hydrogen evolution reaction	Zhang	Wuyu	Chemistry	Ph.D.	Craig Grapperhaus	Robert Buchanan
127	2017	Evaluating ligand assisted activation of small molecules through proton reduction and alcohol oxidation	Jain	Rahul	Chemistry	Ph.D.	Craig Grapperhaus	Robert Buchanan
128	2017	Homogeneous ligand-centered hydrogen evolution and hydrogen oxidation : exploiting redox non-innocence to drive catalysis	Haddad	Andrew Z.	Chemistry	Ph.D.	Craig Grapperhaus	Robert Buchanan

129	2017	A comparison of mean age theory and residence time distributions in mixed systems	Theaker	Nolan	Chemical Engineering	M.Eng.	Eric Berson	Yongsheng Lian
130	2017	Effect of high cationic flocculant on anaerobic digestion of municipal wastewater	John	Prathap D.	Chemical Engineering	M.Eng.	Eric Berson	James Watters
131	2017	Towards a cost-effective biorefinery : production of activated carbons from residual biomass for energy storage devices	Herde	Zachary Dean	Chemical Engineering	M.Eng.	Eric Berson	Noppadon Sathitsuksanoh
132	2017	Water-soluble Pd and Pd-alloy nanoparticles as catalysts in biphasic solvent	Bhama	Shekhar	Chemistry	Ph.D.	Francis Zamborini	Martin O'Toole
133	2017	Controlled electrochemical synthesis of single one-dimensional metal nanochains across microgap electrodes	Konutham	Amareshwari	Chemistry	M.S.	Francis Zamborini	
134	2017	Fabrication and functionalization of carbon nanocages for use in CFx batteries	Smith	Nathan	Physics	M.S.	Gamini Sumanasekera	Jacek Jasinski
135	2017	Synthesis and fundamental property studies of energy material under high pressure	Akhthar	Meysam	Physics	Ph.D.	Gamini Sumanasekera	Jacek Jasinski
136	2017	Data driven discovery of materials properties	Khmaissia	Fadoua	Computer Science and Engineering	Ph.D.	Hichem Frigui	Mahendra Sunkara
137	2017	Transient absorption studies of CdSe nanocluster passivated with phenylthiocarbamate ligands	Xie	Yizhou	Chemistry	Ph.D.	Jinjun Liu	Sachin Handa
138	2017	Novel processing approaches for thin film solar and related technologies	Lavery	Brandon	Chemical Engineering	Ph.D.	Mahendra Sunkara	Thad Druffel
139	2017	Novel III-V alloys for unassisted water splitting	Garcia	Alejandro	Chemical Engineering	Ph.D.	Mahendra Sunkara	Thomas Starr
140	2017	Development and degradation analysis of novel micro and nanostructured transition metal oxide (TMO) anodes for aqueous sodium ion batteries	Mukherjee	Santanu	Mechanical Engineering	Ph.D.	Sam Park	Thomas Berfield
141	2017	All-optical switching in ferromagnetic superlattices	Marashi	Faren Hoveyda	Physics	Ph.D.	Serban Smadici	Chakram Jayanthi
142	2017	Piezoelectric bistable buckled beam energy harvester	Algeier	Brian Edward	Mechanical Engineering	Ph.D.	Thomas Berfield	Christopher Richards
143	2017	The macro-modelling of steel fiber reinforced concrete/mortar flexural tensile behavior and mix optimization for flexural strength	Liu	Li	Civil Engineering	Ph.D.	William McGinley	Young Hoon Kim
144	2017	Numerical investigation of drop impingement on dry and wet surfaces	Guo	Yisen	Mechanical Engineering	Ph.D.	Yongsheng Lian	Dar-Jeng Chang
145	2017	Fused filament fabrication 3D printing using low-melting alloys.	Warrier	Nirupama	Mechanical Engineering	Ph.D.	Kunal Kate	Jagannadh Satyavolu
146	2018	Hybrid perovskite characterization and device applications	Fernando	Kasun	Electrical and Computer Engineering	Ph.D.	Bruce Alphenaar	Aditya Mohite
147	2018	Vertical gallium nitride schottky diodes for power switching applications.	Kolli	Sowmya	Electrical and Computer Engineering	Ph.D.	Bruce Alphenaar	Mahendra Sunkara

148	2018	Plasma based synthesis and surface modification of graphene	Zhao	Rong	Physics	Ph.D.	Gamini Sumanasekera	Chakram Jayanthi
149	2018	Studies of Mixed CH ₃ NH ₃ PbI ₃ -xCl _x Perovskites - A Problem of Their Stability	Wincukiewicz	Adam		Ph.D.	Jacek Jasinski	
150	2018	Reactive lamination of perovskite solar cells	Burns	Lyndie	Chemical Engineering	Ph.D.	James Watters	Thad Druffel
151	2018	Computational prediction, characterization, and methodology development for two-dimensional nanostructures: phosphorene and phosphide binary compounds	Zhang	Congyan	Physics	Ph.D.	Ming Yu	Chakram Jayanthi
152	2018	Biophysical exploration of conformational environments in zymogen prothrombin and blood coagulant thrombin	Billur	Ramya	Chemistry	Ph.D.	Muriel Maurer	Richard Wittebort
153	2018	Exploration of radiation damage mechanism in mems devices	Shuvra	Pranoy	Electrical and Computer Engineering	Ph.D.	Shamus McNamara	Bruce Alphenaar
154	2018	A novel design for a silicon and cadmium telluride tandem solar cell	Vittitow	Jacob A	Electrical and Computer Engineering	Ph.D.	Shamus McNamara	Sergio Mendes
155	2018	Low Temperature Desiccants in Atmospheric Water Generation	Gupta	Sunil	Mechanical Engineering	Ph.D.	Ellen Brehob	Thad Druffel
156	2019	Synthesis, characterization, and evaluation of metal complexes with cancer selective anti-proliferative effects and hydrogen evolution catalytic properties	Vishnosky	Nicholas	Chemistry	Ph.D.	Craig Grapperhaus	Robert Buchanan
157	2019	Oxygen deficient perovskites: effect of structure on electrical conductivity, magnetism and electrocatalytic activity	Hona	Ram Krishna	Chemistry	Ph.D.	Farshid Ramezanipour	Mark Noble
158	2019	Electrochemical determination of surface area-to-volume ratio for metal nanoparticle analysis	Sharma	Jay Narayan	Chemistry	Ph.D.	Francis Zamborini	Cecilia Yappert
159	2019	Stability and reactivity analysis of single metal and bimetallic nanostructures by anodic stripping voltammetry	Pattadar	Dhruba Kumar	Chemistry	Ph.D.	Francis Zamborini	Richard Baldwin
160	2019	Use of anodic stripping voltammetry to study the size-selective electrophoretic deposition and aggregation-dependent oxidation of metal nanoparticles	Allen	Stacy	Chemistry	Ph.D.	Francis Zamborini	Richard Baldwin
161	2019	Synthetic methods and biological applications of nitrogen heterocycles to compounds of biological interest	Ronnebaum	Jarrid	Chemistry	Ph.D.	Frederick Luzzio	Sachin Handa
162	2019	Lithium molybdate-sulfur battery	Dharmasena	Ruchira Ravinath	Physics	Ph.D.	Gamini Sumanasekera	Chakram Jayanthi
163	2019	2D materials based heterostructures : a lithography free method	Alruqi	Adel	Physics	Ph.D.	Gamini Sumanasekera	Ming Yu
164	2019	Laser spectroscopy investigations of jet-cooled metal-containing free radicals	Paul	Anam Chandra	Chemistry	Ph.D.	Jinjun Liu	Lee Thompson
165	2019	Laser spectroscopy investigations on molecular and free radicals dynamics	Telfah	Hamzeh	Chemistry	Ph.D.	Jinjun Liu	Sergio Mendes
166	2019	Laster spectroscopic investigations of organic alkoxy and peroxy radicals	Reza	Md Asmaul	Chemistry	Ph.D.	Jinjun Liu	Richard Wittebort

167	2019	Triple-junction Solar Cells : in parallel	Mays	Levi C	Electrical and Computer Engineering	Ph.D.	John Naber	Sergio Mendes
168	2019	All season heat pipe system	Parsons	Adrienne Marie	Mechanical Engineering	Ph.D.	Keith Sharp	Ellen Brehob
169	2019	Plasma-assisted liquid phase epitaxy of gallium nitride using molten gallium	Jaramillo	Daniel	Chemical Engineering	Ph.D.	Mahendra Sunkara	Gamini Sumanasekera
170	2019	Plasma oxidation of liquid precursors for complex metal oxides	Ajayi	Babajide Patrick	Chemical Engineering	Ph.D.	Mahendra Sunkara	Gautam Gupta
171	2019	Nanowire based adsorbents/catalysts for CO2 capture and utilization	Nambo	Apolo	Chemical Engineering	Ph.D.	Mahendra Sunkara	Noppadon Sathitsuksanoh
172	2019	Transforming moss P. patens with lignin peroxidase through heterologous protein expression	Rozsa	Jesse Lee	Biology	Ph.D.	Mark Running	Nobuyuki Matoba
173	2019	An electrochemical instrument for the analysis of heavy metals in water via anodic stripping coulometry for applications in remote sensing	Kaht	Kelsey Lynn	Chemistry	Ph.D.	Richard Baldwin	
174	2019	Optical direct detection of thermal vibrations of ultralow stiffness micro-nano structures	Chowdhury	Sri Sukanta	Electrical and Computer Engineering	Ph.D.	Robert Cohn	Aly Farag
175	2019	Numerical investigation of coalescence-induced self-propelled behavior of droplets on non-wetting surfaces and wedged surfaces	Chen	Yan	Mechanical Engineering	Ph.D.	Yongsheng Lian	Ellen Brehob
176	2019	Design and predicting performance of carbon nanotube reinforced cementitious materials : mechanical properties and dispersion characteristics	Ramezani	Mahyar	Civil Engineering	Ph.D.	Young Hoon Kim	Zhihui Sun
177	2019	Purification of Biomass Hydrolyzates for the Promotion of Xylose Diester Formation	Fernandez	Laura	Chemical Engineering	Ph.D.	Eric Berson	Jagannadh Satyavolu
178	2019	Experimental Investigation of the Manufacture of Tunable Graphene Oxide Filter Membranes using Intense Pulsed Light	Koetter	Joshua	Mechanical Engineering	Ph.D.	Ellen Brehob	Thad Druffel
179	2020	Materials-processing relationships for metal fused filament fabrication of Ti-6Al-4V alloy.	Singh	Paramjot	Mechanical Engineering	Ph.D.	Kunal Kate	Jagannadh Satyavolu
180	2020	TBD	Sudan	Kavish	TBD	Ph.D.	Kunal Kate	
181	2020	Novel Dichalcogenide Material Systems and Architectures for Aqueous Batteries	Nicholas	Schuppert	Mechanical Engineering	Ph.D.	Sam Park	
182	2020	Electrochemical Reduction of CO2 and CO to Produce Fuels and Chemicals	Strain	Jacob	Chemistry	Ph.D.	Frank Zamborini	Joshua Spurgeon