

University of Louisville
Conn Center for Renewable Energy Research
 Impact Reporting: Publications 2020
 Rev. 06/2024, WoS by AM

2020		PUBLICATIONS BY YEAR	CONN CENTER STAFF & ASSOCIATED FACULTY	5.714	2547	91	21	112	5.82	2123	5.33	424	
#	INDEX	AUTHORS	TITLE	JOURNAL	IMPACT FACTOR (IF)	CITATIONS (CIT)	ASSOC FAC (AF) PUB	CONN STAFF (CS)-DRIVEN PUB	TOTAL PUBS	IF AF	CIT AF	IF CS	CIT CS
1	ALN	S. A. Alnaanah, T. J. Roussel, J. H. Ghithan, A. Qatamin, M. A. Irziqat, H. Telfah, J. Liu, and S. B. Mendes	Electroactive interface for enabling spectroelectrochemical investigations in evanescent-wave cavity-ring-down spectroscopy	<i>Anal. Chem.</i> 92, 11288–11296 (2020)	7.4	5	1		1				
2	ALQ	M. H. Alqatamin, B. Bhagwat, N. Hawkins, J. Latham, M. L. McIntyre	Self-Synchronizing Current Control for Single-Stage Three-Phase Grid-Connected Photovoltaic Systems	2020 American Control Conference (ACC), Denver, CO, USA, pp. 793-797	5.94	1	1		1				
3	ALQ	M. H. Alqatamin, J. Latham, Z. T. Smith, B. M. Grainger, M. L. McIntyre	Current Control of a Three-Phase, Grid-Connected Inverter in the Presence of Unknown Grid Parameters without a Phase Locked Loop	IEEE Journal of Emerging and Selected Topics in Power Electronics	5.5	12	1		1				
4	ALQ	M. H. Alqatamin, N. Hawkins, M. L. McIntyre	Filter-Based Controller to Improve the Power Quality of Single-Phase Grid-Connected Inverters	2020 American Control Conference (ACC), Denver, CO, USA, pp. 180-185	5.94	0	1		1				
5	ALQ	Moath Alqatamin, M. L. McIntyre	Improvement the Power Quality of Single-Phase Grid-Connected Inverter by Filter-Based Control Scheme	IET Power Electronics, February 2020	2	0	1		1				
6	AND	A. N. Andriotis and M. Menon	Goodenough-Kanamori Rules Applied to Wurtzite Crystals	J. Phys.: Condens. Matter, 32, 295801	2.7	7		1	1				
7	AND	A. N. Andriotis and M. Menon	Successive Spin Polarization Contribution to the Magnetic Coupling in Diluted Magnetic Semiconductors: A Quantitative verification	Journal of Magnetism and Magnetic Materials, 501, 166313	2.7	4		1	1				
8	AND	Andres, S. A.; Bajaj, K.; Vishnosky, N. S.; Peterson, M. A., Mashuta, M. S.; Buchanan, R. M.; Bates, P. J.; Grapperhaus, C. A.	Synthesis, Characterization, and Biological Activity of Hybrid Thiosemicarbazone-Alkylthiocarbamate Metal Complexes	Inorg. Chem. 2020, 59, 4924-4935	4.6	59	1		1				
9	ANS	Tharique N. Ansari,† Jacek B. Jasinski,‡ David K. Leahy,‡* Sachin Handaj*	Metal-Micelle Cooperativity: Phosphine Ligand-Free Ultrasmall Palladium(II) Nanoparticles for Oxidative Mizoroki-Heck-Type Couplings in Water at Room Temperature	JACS Au	8	32	1		1				
10	ARN	Arnold, W., D. A. Buchberger, Y. Li, M. Sunkara, T. Druffel and H. Wang	Halide doping effect on solvent-synthesized lithium argyrodites Li6PS5X (X= Cl, Br, I) superionic conductors	Journal of Power Sources 464. DOI: 10.1016/j.jpowsour.2020.228158	9.2	50	1		1				
11	ASG	M Asghari, D Sierra-Sosa, AS Elmaghraby	A topic modeling framework for spatio-temporal information management	Information Processing & Management	8.6	16	1		1				
12	BAL	K. Balla, J. G. D. Tadimeti, K. H. Kate*, and J. Satyavolu	3D printing of modified soybean hull fiber/polymer composites	<i>Materials Chemistry and Physics</i> , vol. 254, 2020	4.6	34		1	1				
13	BAL	K. Balla, K. H. Kate*, J. G. Dattatreya Tadimeti, and J. Satyavolu	Influence of Soybean Hull Fiber Concentration on the Water Absorption and Mechanical Properties of 3D-Printed Thermoplastic Copolyester/Soybean Hull Fiber Composites	Journal of Materials Engineering and Performance, 2020	2.3	9		1	1				
14	BAL	Vamsi Krishna Balla, Jogj Ganesh Dattatreya Tadimeti, Kavish Sudan, Jagannadh Satyavolu, Kunal H. Kate	First report on fabrication and characterization of soybean hull fiber: polymer composite filaments for fused filament fabrication	Prog Addit Manuf	4.5	16	1		1				
15	BAR	P. Barai, A. Ngo, B. Narayanan, K. Higa, L. Curtiss and V. Srinivasan	The role of local inhomogeneities on dendrite growth in LLZO-based solid electrolytes	Journal of the Electrochemical Society 167, 100537	3.9	55	1		1				
16	BAS	Basu, P., Banerjee, S., and Ghasemi-Fare, O.	Fragility analysis of drilled shafts in sand- an analytical correspondence between reliability index and factor of safety	Soils and Foundations, 60, 1112-1130	3.7	3	1		1				
17	BHA	B. Bhagwat, M. H. Alqatamin, M. L. McIntyre	Filter-Based Control of a Buck Converter for Uncertain Non-linear Loads	IET Power Electronics, February 2020	2	1	1		1				
18	BHA	Bhama, S.; Sibakoti, T.R.; Jasinski, J.B.; Zamborini, F.P.	Highly Active, Selective, and Recyclable Water-Soluble Glutathione-Stabilized Pd and Pd-Alloy Nanoparticle Catalysts in Biphasic Solvent	CHEMCATCHEM 2020, 12, 2253-2261	4.5	6	1		1				
19	BIH	Bihani, M.; Ansari, T. N.; Finck, L.; Bora, P. P.; Jasinski, J. B.; Pavuluri, B.; Leahy, D. K.; Handa, S.	Scalable α -Arylation of Nitriles in Aqueous Micelles using Ultrasmall Pd Nanoparticles: Surprising Formation of Carbanions in Water	ACS Catal., 2020, 10, 6816	12.9	40	1		1				
20	CAL	Caleb A. Calvary, Oleksandr Hietsoi, Dillon T. Hofsommer, Henry C. Brun, Alison M. Costello, Mark S. Mashuta, Joshua M. Spurgeon, Robert M. Buchanan, Craig A. Grapperhaus	Copper bis(thiosemicarbazone) complexes with pendent polyamines: Effects of proton relays and charged moieties on electrocatalytic HER	<i>Eur. J. Inorg. Chem.</i> , 2020/2021	2.3	9	1		1				
21	CHA	H. Chan, M. Cherukara, T. Loeffler, B. Narayanan, and S. Sankaranarayanan	Machine learning enabled autonomous microstructural characterization in 3D samples	npj Computational Materials 6, 1	9.7	77	1		1				

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22	CHO	Chowdhury, E.; Grapperhaus, C. A.; O'Toole, M. G	Facet-selective asymmetric functionalization of anisotropic gold nanoprisms for Janus particle synthesis	J. Nano. Res. 2020, 22, 142	2.5	7	1		1
23	CHO	E. Chowdhury, M. Rahaman, N. Sathitsuksanoh, C. Grapperhaus, M. O'Toole	DNA-induced assembly of gold nanoprisms and polystyrene beads into 3D plasmonic SERS substrates	Nanotechnology	3.5	8	1		1
24	CRO	Cronin, S. P.; Strain, J. M.; Mashuta, M. S.; Spurgeon, J. M.; Buchanan, R. M.; Grapperhaus, C. A.	Exploiting Metal-Ligand Cooperativity to Sequester, Activate, and Reduce Atmospheric Carbon Dioxide with a Neutral Zinc Complex	<i>Inorg. Chem.</i> 2020, 59, 4835-4841	4.6	25	1		1
25	DAN	N. Dandu, L. Ward, R. Assary, P. Redfern, B. Narayanan, I. Foster, L. Curtiss	<i>Quantum-Chemically Informed Machine Learning: Prediction of Energies of Organic Molecules with 10 to 14 Non-hydrogen Atoms</i>	The Journal of Physical Chemistry A 124, 5804	2.9	30	1		1
26	DER	Masoud Derakhshani, Thomas A. Berfield	Dynamic Behavior and Output Charge Analysis of a Bistable Clamped-Ends Energy Harvester	Nonlinear Structures and Systems, Volume 1, 2020		0	1		1
27	DHA	Ruchira R Dharmasena, Alejandro Martinez-Garcia, Veerendra Alta, Muhammad Z Akram, Gamin U Sumanasekera, Mahendra K Sunkara	Lithium Molybdate (Li ₂ MoO ₃)-Sulfur Battery	Journal Batteries & Supercaps, 3, 275	5.7	4		1	1
28	DON	Dong, W., Li, W., Shen, L., Sun, Z., and Sheng, D.	Piezoresistivity of smart carbon nanotubes (CNT) reinforced cementitious composite under integrated cyclic compression and impact	<i>Composite Structures</i> , Vol 241, June, 112106.	6.3	43	1		1
29	EME	Emery, Sarah M.; Reid, Matthew L.; Hacker, Sally D.	Soil nematodes differ in association with native and non-native dune-building grass species	Applied Soil Ecology	4.8	8	1		1
30	EME	Emery, Sarah M.; Stahlheber, Karen A.; Gross, Katherine L.	Drought minimized nitrogen fertilization effects on bioenergy feedstock quality	Biomass & Bioenergy	6	22	1		1
31	EST	Estahbanati, S.H., Boushehri, R., Soroush, A., Ghasemi-Fare, O.	Numerical analysis of dynamic response of lifelines facilities adjacent to deep excavations	Geo-congress, ASCE, Feb 25-28		1	1		1
32	EST	Estahbanati, S.H., Boushehri, R., Soroush, A., Ghasemi-Fare, O.	Numerical study of the effects of deep excavations on dynamic performance of buried pipelines	Geo-congress, ASCE, Feb 25-28.		3	1		1
33	FAG	Faghih, Mohammad M.; Sharp, M. Keith	Deformation of human red blood cells in extensional flow through a hyperbolic contraction	Biomechanics and Modeling in Mechanobiology	3.5	21	1		1
34	FAN	Fanah, S.J.; Ramezanipour, F.	Strategies for Enhancing Lithium-Ion Conductivity of Triple-Layered Ruddlesden-Popper Oxides: Case Study of Li _{2-x} La _{2-y} Ti _{3-z} Nb ₁₀ O ₁₀	<i>Inorganic Chemistry</i> 2020, 59, 9718-9727	4.6	6	1		1
35	GHA	Gahremani, A. H., B. Martin, A. Gupta, J. Bahadur, K. Ankireddy and T. Druffel	Rapid fabrication of perovskite solar cells through intense pulse light annealing of SnO ₂ and triple cation perovskite thin films	Materials & Design 185. DOI: 10.1016/j.matdes.2019.108237	8.4	44		1	1
36	GHA	Ghavami, M., Kebria, D.Y., Ghasemi-Fare, O.	Application of Organically Modified Clay in Removing BTEX from Produced Water	Geo-congress, ASCE, Feb 25-28.		6	1		1
37	GUO	A. Guo, Sun, Z., and Satyavolu, J.	Impact of modified kenaf fibers on shrinkage and cracking of cement pastes	Construction and Building Materials 264	7.4	46		1	1
38	GUO	A. Guo, Z. Sun, C. Qi, N. Sathitsuksanoh	Hydration of Portland Cement Pastes Containing Untreated and Treated Hemp Powders	J. Mater. Civ. Eng., 32 (2020) 04020148	3.2	12	1		1
39	HAW	N. Hawkins, M. H. Alqatamin, B. Bhagwat, M. L. McIntyre	Nonlinear Control and Observation of a PMSG Wind Turbine through Unknown Wind Torque Characteristics	2020 American Control Conference (ACC), 2020, pp. 3467-3472		0	1		1
40	HAW	N. Hawkins, N. Jewell, M. H. Alqatamin, B. Bhagwat, M. L. McIntyre	A Nonlinear Fault Detection Scheme for PV Applications	2020 American Control Conference (ACC), Denver, CO, USA, pp. 3188-3192		4	1		1
41	HER	Z.D. Herde, Dharmasena, R., Sumanasekera, G., Tumuluru, J.S., and Satyavolu, J.	Impact of hydrolysis on surface area and energy storage applications of activated carbons produced from corn fiber and soy hulls	<i>Carbon Resources Conversion</i> 3	6	28		1	1
42	HON	Hona, R.K.; Karki, S.B.; Ramezanipour, F.	Oxide Electrocatalysts Based on Earth-Abundant Metals for Both Hydrogen- and Oxygen-Evolution Reactions	<i>ACS Sustainable Chem. Eng.</i> 2020, 8, 11549-11557	8.4	50	1		1
43	HON	Hona, R.K.; Ramezanipour, F.	Effect of the Oxygen Vacancies and Structural Order on the Oxygen Evolution Activity: A Case Study of SrMnO _{3-δ} Featuring Four Different Structure Types	<i>Inorganic Chemistry</i> 2020, 59, 4685-4692	4.6	37	1		1
44	HON	Hona, R.K.; Thapa, Arjun K.; Ramezanipour, F.	An Anode Material for Lithium-Ion Batteries Based on Oxygen-Deficient Perovskite Sr ₂ Fe ₂ O _{8-δ}	<i>ChemistrySelect</i> 2020, 5, 5706-5711	2.1	2	1		1

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45	HOS	Hossain, Anwar; Rahaman, Mohammad Shahinur; Lee, David; Thanh Khoa, Phung; Canlas, Christian G.; Simmons, Blake A.; Renneckar, Scott; Reynolds, William; George, Anthe; Tulaphol, Sarttrawut; Sathitsuksanoh, Noppadon	Enhanced Softwood Cellulose Accessibility by H3PO4 Pretreatment: High Sugar Yield without Compromising Lignin Integrity	Industrial & Engineering Chemistry Research	4.2	11	1		1
46	JIT	Ji-Tzuoh Lin, Peng Wang, Pranoy Shuvra, Shamus McNamara, Mike McCurdy, Jim Davidson, Kevin Walsh, Mike Alles, Bruce Alphenaar	Impact of X-Ray Radiation on GaN/AlN MEMS Structure and GaN HEMT Gauge Factor Response	2020 IEEE 33rd International Conference on Micro Electro Mechanical Systems (MEMS)		3	1		1
47	JIT	Ji-Tzuoh Lin, Pranoy Deb Shuvra, Jerry A Yang, Shamus McNamara, Kevin Walsh, Bruce Alphenaar	Buckled beam mechanical memory using an asymmetric piezoresistor for readout	Journal of Micromechanics and Microengineering 30 (7), 075006	2.3	1	1		1
48	KAR	Bhupendra Karki, Byron Freelon, Manthila Rajapakse, Rajib Musa, SM Shah Riyadh, Blake Morris, Usman Abu, Ming Yu, Gamin Sumanasekera, Jacek B Jasinski	Strain-induced vibrational properties of few layer black phosphorus and MoTe2 via Raman spectroscopy	Nanotechnology, 31, 42, 425707	3.5	28		1	1
49	KAR	Bhupendra Karki, Manthila Rajapakse, Gamin Udaya Sumanasekera, Jacek B Jasinski	Structural and Thermoelectric Properties of Black Arsenic-Phosphorus	ACS Applied Energy Materials, 3 (9), 8543-8551	6.4	28		1	1
50	KAR	Karki, S.B.; Ramezanipour, F.	Effect of Structure on Sensor Properties of Oxygen-Deficient Perovskites, A ₂ BB'O ₃ (A = Ca, Sr; B = Fe; B' = Fe, Mn) for Oxygen, Carbon Dioxide and Carbon Monoxide Sensing	Journal of Electronic Materials 2020, 49, 1557-1567	2.1	17	1		1
51	KAR	Karki, S.B.; Ramezanipour, F.	Pseudocapacitive Energy Storage and Electrocatalytic Hydrogen-Evolution Activity of Defect-Ordered Perovskites Sr _x Ca _{3-x} GaMn ₂ O ₈ (x = 0 and 1)	ACS Applied Energy Materials 2020, 3, 10983-10992	6.4	27	1		1
52	KAR	Karki, Surendra B.; Hona, Ram Krishna; Ramezanipour, Farshid	Effect of Structure on Sensor Properties of Oxygen-Deficient Perovskites, A(2)BB' O-5 (A = Ca, Sr; B = Fe; B' = Fe, Mn) for Oxygen, Carbon Dioxide and Carbon Monoxide Sensing	Journal of Electronic Materials	2.1	17	1		1
53	KHA	Moataz H. Khalil, Mohamed Azab, Ashraf Elsayed, Walaa Sheta, Mahmoud Gabr and Adel S. Elmaghraby	Auto Resource Management to Enhance Reliability and Energy Consumption in Heterogeneous Cloud Computing	International Journal of Computer Networks & Communications (IJCNC) Vol.12, No.2, March 2020		1	1		1
54	KHA	S Khanjar, Q. Shaikh, K. Sudan, P. Lavertu, K. H. Kate	Digital Design and Manufacturing with Thermomechanical Process Simulation for Fused Filament Fabrication 3D Printing	Proceedings of the American Society for Composites—Thirty-fifth Technical Conference, 2020		1	1		1
55	LAK	Lakshmanan, Jagannathan; Zhang, Baochun; Wright, Kalen; Motameni, Amirreza T.; Jagannathan, Vaitheesh L.; Schultz, David J.; Klinge, Carolyn M.; Harbrecht, Brian G.	Tender coconut water suppresses hepatic inflammation by activating AKT and JNK signaling pathways in an in vitro model of sepsis	Journal of Functional Foods	5.6	7	1		1
56	LAT	J. Latham, M. H. Alqatamin, Z. T. Smith, B. Grainger and M. L. McIntyre	Self-Synchronizing Current Control of a Three-Phase Grid-Connected Inverter in the Presence of Unknown Grid Parameters	APEC 2020 - 35th Applied Power Electronics Conference, New Orleans, LA, pp. 793-797		2	1		1
57	LI	Li, Y., D. Cao, W. Arnold, Y. Ren, C. Liu, J. B. Jasinski, T. Druffel, Y. Cao, H. Zhu and H. Wang	Regulated lithium ionic flux through well-aligned channels for lithium dendrite inhibition in solid-state batteries	Energy Storage Materials 31: 344-351. 10.1016/j.ensm.2020.06.029	20.4	56	1		1
58	LI	Li, Y., W. Arnold, A. Thapa, J. B. Jasinski, G. Sumanasekera, M. Sunkara, T. Druffel and H. Wang	Stable and Flexible Sulfide Composite Electrolyte for High-Performance Solid-State Lithium Batteries	ACS Appl Mater Interfaces. 10.1021/acsami.0c08261	9.5	69		1	1
59	LI	Li, Y., W. Arnold, J. B. Jasinski, A. Thapa, G. Sumanasekera, M. Sunkara, B. Narayanan, T. Druffel and H. Wang	Interface stability of LiCl-rich argyrodite Li ₆ PS ₂ Cl with propylene carbonate boosts high-performance lithium batteries	Electrochimica Acta 363. 10.1016/j.electacta.2020.137128	6.6	28		1	1
60	LIN	Lin, Jie; Lian, Yongsheng; Wu, Jianhua	Numerical investigation on vapor-liquid two-phase compression in the cylinder of rotary compressors	Applied Thermal Engineering	6.4	15	1		1
61	LIU	Liu, Yang; Sussman, Mark; Lian, Yongsheng; Hussaini, M. Yousuff	A moment-of-fluid method for diffusion equations on irregular domains in multi-material systems	Journal of Computational Physics	4.1	8	1		1
62	LIV	M. Livchak, P. Singh, R. Thilakratne, J. Satyavolu, K. H. Kate	3D Printing of Kenaf Fiber Reinforced Thermoplastic Polymer Composites	Proceedings of the American Society for Composites—Thirty-fifth Technical Conference, 2020		0		1	1
63	LOE	T. Loeffler, S. Manna, T. Patra, H. Chan, B. Narayanan, and S. Sankaranarayanan	Active Learning A Neural Network Model For Gold Clusters & Bulk From Sparse First Principles Training Data	ChemCatChem 12, 4796	4.5	24	1		1
64	MAR	Martin, B., M. Yang, R. C. Bramante, E. Amerling, G. Gupta, M. F.A.M. van Hest and T. Druffel	Fabrication of Flexible Perovskite Solar Cells via Rapid Thermal Annealing	Materials Letters 276. 10.1016/j.matlet.2020.128215	3	12		1	1
65	MEE	Arianna Meenakshi McNamara, Shamus McNamara, John G. Jones, F. Kenneth Hopkins	New Approach to Beam Diagnostic for High-Power Fiber Lasers	Conference on Lasers and Electro-Optics (CLEO), May 11-15, 2020		0	1		1
66	MOM	Momenzadeh, Niknam; Miyajagi, Hadi; Porter, Daniel Allen; Berfield, Thomas Austin	Polyvinylidene fluoride (PVDF) as a feedstock for material extrusion additive manufacturing	Rapid Prototyping Journal	3.9	16	1		1
67	MOR	Kagiso S More, Christian Walkersdorfer, Ning Kang, Adel S Elmaghraby	Automated measurement systems in mine water management and mine workings – A review of potential methods	Water Resources and Industry, Elsevier, 2020	5.1	19	1		1

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68	MOS	Moshfeqh, Abouzar; Mehri, Abbasali Abouei; Javadzadegan, Ashkan; Jostaghani, Mohammad; Ghasemi-Fare, Omid	Numerical investigation of various nanofluid heat transfers in microchannel under the effect of partial magnetic field: lattice Boltzmann approach	Journal of Thermal Analysis and Calorimetry	4.4	11	1		1
69	MUS	Md Rajib Khan Musa, Congyan Zhang, Adel Bandar A Alruqui, Rong Zhao, Jacek B Jasinski, Gamini Sumanasekera, Ming Yu	Insight the process of hydrazine gas adsorption on layered WS2: a first principle study	Nanotechnology, 31, 49, 495703	3.5	10		1	1
70	NAT	Nath, S. D.; Gupta, G.; Kearns, M.; Gulsoy, O.; Atre, S. V. J. R. P. J	Effects of layer thickness in laser-powder bed fusion of 420 stainless steel	Rapid Prototyping Journal	3.9	20	1		1
71	OGU	H. Ogunsuyi, Herde, Z., Thilakarathne R., and Satyavolu, J.	Plantain-based Integrated Biorefinery	EC Agriculture 6(5)	7.27	1		1	1
72	PET	Petkova, D.; Borlinghaus, N.; Sharma, S. Kaschel, J.; Lindner, T.; Klee, J.; Haller, V.; Heitz, S.; Dietrich, J.; Braje, W.; Handa, S.	Hydrophobic Pockets of HPMC Enable Extremely Short Reaction Times in Water	ACS Sustainable Chem. Eng. 2020, 8, 12612	8.4	45	1		1
73	QU	Chuang Qu, Bruce Alphenaar, Shamus McNamara, Kevin Walsh	Fabrication of Nanoporous Membranes for Knudsen Pump Using Glancing Angle Deposition	33rd International Conference on Micro Electro Mechanical Systems (IEEE MEMS 2020), Vancouver, Jan. 18-22, 2020.		11	1		1
74	RAH	M. Rahaman, T. Phung, M.A. Hossain, E. Chowdhury, S. Tulaphol, S. Lalvani, M. O'Toole, G. Willing, J. Jasinski, M. Crocker, N.	Hydrophobic functionalization of HY zeolites for efficient conversion of glycerol to solketal	Appl. Catal., A, (2020) 117369.	5.5	48	1		1
75	RAJ	Manthila Rajapakse, George Anderson, Congyan Zhang, Rajib Musa, Jackson Walter, Ming Yu, Gamini Sumanasekera, Jacek B Jasinski	Gas adsorption and light interaction mechanism in phosphorene-based field-effect transistors	Physical Chemistry Chemical Physics, 22, 10, 5949	3.3	13		1	1
76	RAJ	Manthila Rajapakse, Rajib Musa, Usman O Abu, Bhupendra Karki, Ming Yu, Gamini Sumanasekera, Jacek B Jasinski	Electrochemical Li Intercalation in Black Phosphorus: In Situ and Ex Situ Studies	The Journal of Physical Chemistry C, 124, 10710	3.7	22		1	1
77	RAM	Ramezani, M., Kim, Y.H. and Sun, Z.	Mechanical Properties of Carbon Nanotube Reinforced Cementitious Materials: Database and Statistical Analysis	Magazine of Concrete Research, Vol. 72, No. 20, pp. 1047-1071	2.7	70	1		1
78	RAM	Ramezani, M., Kim, Y.H. and Sun, Z.	Probabilistic Model for Flexural Strength of Cementitious Materials Reinforced with Carbon Nanotube	Composite Structures, Vol. 253, December, 112748	6.3	9	1		1
79	RAT	Dilan Ratnayake, Masoud Derakhshani, Thomas A Berfield, and Kevin M Walsh	Bistability study of buckled MEMS diaphragms	Journal of Physics Communications, Volume 4, Number 10, 2020	1.2	2	1		1
80	RIC	Rice, J., Kim, Y.H., Sun, Z. and Mohsen, J.P.	Evaluation of Light Reflectiveness of Modern Pavement: Standard Tungsten Incandescent and LED	ASCE Journal of Transportation Engineering, Part B: Pavements, Vol. 146, No. 2, 04020007	2.3	4	1		1
81	SCH	Nicholas David Schuppert, Santanu Mukherjee, Alex Bates, Jacek B. Jasinski, Sang C. Lee, and Sam Park	Growth and influence of a porous iron oxide nanolayer on LiMn ₂ O ₄ in an aqueous rechargeable lithium-ion battery	Energy Storage, (2020);2:e143	3.2	1	1		1
82	SHA	Ahmed Shaffie, Ahmed Soliman, Ali Mahmoud, Hadit Abu Khalifeh, Fatma Taher, Mohammed Ghazal, Adel Elmaghraby and Ayman El-Baz	Earl diagnosis system for lung nodules based on the integration of a higher-order MGRF appearance feature model and 3D-CNN	Lung Cancer and Imaging, Chapter 1, pp 1-1 to 1-22, IOP Publishing Ltd 2020		4	1		1
83	SHA	Shang, H., Sun, Z. and Bhaskar, N.	Simulating the long-term performance of multi-functional green pervious concrete (MGPC) pavement in stormwater runoff-induced PAHs contaminant remediation	ASCE Journal of Environmental Engineering, Vol. 146, No. 6, 04020033	2.2	5	1		1
84	SHA	Sharma, S.; Buchbinder, N. W.; Braje, W. M.; Handa, S	Fast Amide Couplings in Water: Extraction, Column Chromatography, and Crystallization Not Required	Org. Lett. 2020, 20, 5737.	5.2	61	1		1
85	SHA	Sharma, S.; Das, J.; Handa, S.	A Glimpse into Green Chemistry Practices in the Pharmaceutical Industry	ChemSusChem, 2020, 13, 2859	8.4	84	1		1
86	SIB	Sibekoti, T.R.; Jasinski, J.B.; Nantz, M.H.; Zamborini, F.P.	Iodine Activation: A General Method for Catalytic Enhancement of Thiolate Monolayer-Protected Clusters	Nanoscale 2020, 12, 12027-12037	6.7	5	1		1
87	SIE	D. Sierra-Sosa, M. Telahun and A. S. Elmaghraby	TensorFlow Quantum: Impacts of Quantum State Preparation on Quantum Machine Learning Performance	IEEE Access, doi: 10.1109/ACCESS.2020.3040798.	3.9	19	1		1
88	SIN	P. Singh, V. K. Balla, A. Tofangchi, S. V. Atre, and K. H. Kate	Printability studies of Ti-6Al-4V by metal fused filament fabrication (MF3)	International Journal of Refractory Metals and Hard Materials, vol. 91, 2020	3.6	60	1		1
89	SIN	Singh, Paramjit; Shaikh, Qasim; Balla, Vamsi K.; Atre, Sundar V.; Kate, Kunal H.	Estimating Powder-Polymer Material Properties Used in Design for Metal Fused Filament Fabrication (DMF3))	Jom	2.6	30	1		1
90	SLE	Ahmed A. Sleman, Ahmed Soliman, Ali H. Mahmoud, Mohammed Ghazal, Harpal Sandhu, Shlomit Schaal, Adel Elmaghraby, Ayman El-Baz in Diabetes and Retinopathy (Editor(s): Ayman S. El-Baz, Jasjit S. Suri)	Segmentation of retinal layers from OCT scans	Diabetes and Retinopathy, Elsevier, 2020, Pages 109-132, ISBN 9780128174388, https://doi.org/10.1016/B978-0-12-817438-8.00006-7.		3	1		1

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91	STR	Strain, J.M., and Spurgeon, J.M.	Assessing contaminants from ion-exchange membranes in the evaluation of aqueous electrochemical carbon dioxide reduction	J. CO ₂ Util	7.7	5		1	1
92	STR	Strain, J.M., Gulati, S., Pishgar, S., and Spurgeon, J.M.,	Pulsed electrochemical carbon monoxide reduction on oxide-derived copper catalyst	ChemSusChem	8.4	24		1	1
93	SUD	K. Sudan, P. Singh, A. Gökçe, V. K. Balla, and K. H. Kate	Processing of hydroxyapatite and its composites using ceramic fused filament fabrication (CF3)	Ceramics International, vol. 46, no. 15, pp. 23922-23931, 2020	5.2	12	1		1
94	TAD	J. G. D. Tadmireti, R. Thilakarathne, V. K. Balla, K. H. Kate, and J. Satyavolu	A two-stage C5 selective hydrolysis on soybean hulls for xylose separation and value-added cellulose applications	Biomass Conversion and Biorefinery, vol. 2020, 2020	4	8		1	1
95	TAM	Tamizdoust M.M., Ghasemi-Fare, O.	Coupled thermo-hydro-mechanical modeling of saturated Boom clay	Geo-congress, ASCE, Feb 25-28		4	1		1
96	TAM	Tamizdoust M.M., Ghasemi-Fare, O.	Non-equilibrium phase change model to analyze coupled heat, liquid and vapor water flow in the shallow subsurface	Water Resources Research, 56 (10), 10-1029/2020WR027381	5.4	12	1		1
97	TAM	Tamizdoust M.M., Moradi, A., Ghasemi-Fare, O.	Numerical analysis of moisture variation and transport in the vicinity of a heat source	Geo-congress, ASCE, February 25-28		4	1		1
98	TAM	Tamizdoust, Mohammadreza Mir; Ghasemi-Fare, Omid	A fully coupled thermo-poro-mechanical finite element analysis to predict the thermal pressurization and thermally induced pore fluid flow in soil media	Computers and Geotechnics	5.3	45	1		1
99	TAN	Tang, H.; Brothers, E. N. B.; Grapperhaus, C. A.; Hall, M. B	Electrocatalytic Hydrogen Evolution and Oxidation with Rhenium Tris(thiolate) Complexes: A Competition between Rhenium and Sulfur for Electrons and Protons	ACS Catal. 2020, 10, 3778-3789	12.9	21	1		1
100	TEL	H. Telfah, A. C. Paul, J. Liu	Aligning an optical cavity: with reference to cavity ring-down spectroscopy	Appl. Opt. 59, 9464-9468 (2020)	1.9	8	1		1
101	TEL	Michael Telahun, Daniel Sierra-Sossa and Adel S. Elmaghraby	Heuristic Analysis for In-Plane Non-Contact Calibration of Rulers Using Mask R-CNN	Information 2020, 11(5), 259	3.1	1	1		1
102	TUL	Tulaphol, Saritrawut; Hossain, Md Anwar; Rahaman, Mohammad Shahinur, Liu, Li-Yang; Phung, Thanh Khoa; Renneckar, Scott; Grisdanurak, Nurak; Sathitsuksanoth, Noppadon	Direct Production of Levulinic Acid in One Pot from Hemp Hurd by Dilute Acid in Ionic Liquids	Energy & Fuels	5.3	29	1		1
103	VAL	Valmikanathan P. Onbattuvelli, Ravi K. Enneti, John Simonsen, Kunal H. Kate, Vamsi K. Balla, Sundar V. Atre	Structure and thermal stability of cellulose nanocrystal/polysulfone nanocomposites	Materials Today Communication, Vol. 22, 2020, 100797	3.8	19	1		1
104	XIE	Xie Z, Raju M. Adhichetty P., X. Fu, Nantz M.	Effect of Thiol Molecular Structure on the Sensitivity of Gold Nanoparticle-Based Chemiresistors toward Carbonyl Compounds	Sensors 2020, 20, 7024	3.9	3	1		1
105	XU	Z. Xu, L. Zhang, L. Zhao, B. Li, B. Bhatia, C. Wang, K.L. Wilke, Y. Song, O. Labban, J.H. Lienhard, R. Wang, and E.N. Wang	Ultrahigh-Efficiency Desalination via a Thermally-Localized Multistage Solar Still	Energy & Environmental Science 13, 830-839, 2020	32.5	361	1		1
106	XUE	Xue, L., Li, W., Qu, F., Sun, Z. and Shah, S.P.	Self-healing efficiency and crack closure of smart cementitious composite with crystalline admixture and structural polyurethane	Construction and Building Materials, Vol. 260, November, 119955	7.4	38	1		1
107	YAN	Y. Yan, K. Sharma, T. A. Miller and J. Liu	Rotational and fine structure of open-shell molecules in nearly degenerate electronic states. II. Interpretation of experimentally determined interstate coupling parameters of alkoxy radicals	J. Chem. Phys. 153, 174306 (2020)	4.4	4	1		1
108	ZAH	S Zahia, B Garcia-Zapirain, A Elmaghraby	Integrating 3D Model Representation for an Accurate Non-Invasive Assessment of Pressure Injuries with Deep Learning	Sensors 20 (10), 2933	3.9	22	1		1
109	ZHA	H.-T. Zhang, T. Park, I. Zaluzhnyy, Q. Wang, S. Nagnath Wadekar, S. Manna, R. Andrewis, P. Sprau, Y. Sun, Z. Zhang, C. Huang, H. Zhou, Z. Zhang, B. Narayanan, G. Srinivasan, N. Hua, E. Nazaretski, X. Huang, H. Yan, M. Ge, Y. Chu, M. Cherukara, M. Holt, M. Krishnamurthy, O. Shpyrko, S. Sankaranarayanan, A. Frano, K. Roy, and S. Ramanathan	Perovskite neural trees	Nature Communications 11, 2245	16.6	45	1		1
110	ZHA	L. Zhang, [†] Z. Xu, [†] B. Bhatia, B. Li, L. Zhao, and E.N. Wang	Modeling and Performance Analysis of High-Efficiency Thermally-Localized Multistage Solar Stills	Applied Energy 266, 114864, 2020	11.2	61	1		1
111	ZHA	Q. Zhang, C. Zhang, Z. Hood, M. Chi, C. Liang, N. Jalarvo, M. Yu, H. Wang	Abnormally Low Activation Energy in Cubic Na ₃ Sb ₂ S ₇ Superiorionic Conductor	Chemistry of Materials, 2020, 32, 6, 2264-2271	8.6	32	1		1
112	ZHA	Zhao, J.; Dumont, J. H.; Martinez, U.; Macossay, J.; Artyushkova, K.; Atanassov, P.; Gupta, G.	Graphite Intercalation Compounds Derived by Green Chemistry as Oxygen Reduction Reaction Catalysts	ACS Appl Mater Interfaces	9.5	18	1		1

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PERSONNEL 2020	ASSOCIATED FACULTY	DEPARTMENT, COLLEGE	51
	Alexander, Suraj	Industrial Engineering, JB Speed School of Engineering	1
	Alphenaar, Bruce	Electrical & Computer Engineering, JB Speed School of Engineering	1
	Amos, Delaina	Chemical Engineering, JB Speed School of Engineering	1
	Atre, Sundar	Mechanical Engineering, JB Speed School of Engineering	1
	Bai, Lihui	Industrial Engineering, JB Speed School of Engineering	1
	Baldwin, Richard	Chemistry, College of Arts & Sciences	1
	Berfield, Thomas	Mechanical Engineering, JB Speed School of Engineering	1
	Berson, Eric	Chemical Engineering, JB Speed School of Engineering	1
	Bhatia, Bikram	Mechanical Engineering, JB Speed School of Engineering	1
	Buchanan, Robert	Chemistry, College of Arts & Sciences	1
	Elmaghraby, Adel	Computer Science & Engineering, JB Speed School of Engineering	1
	Emery, Sarah	Biology, College of Arts & Sciences	1
	Faraq, Aly	Electrical & Computer Engineering, JB Speed School of Engineering	1
	French, Mark	Civil & Environmental Engineering, JB Speed School of Engineering	1
	Frigui, Hichem	Computer Science & Engineering, JB Speed School of Engineering	1
	Fu, Xiao-An "Sean"	Chemical Engineering, JB Speed School of Engineering	1
	Ghasemi-Fare, Omid	Civil & Environmental Engineering, JB Speed School of Engineering	1
	Grappnerhaus, Craig	Chemistry, College of Arts & Sciences	1
	Gupta, Gautam	Chemical Engineering, JB Speed School of Engineering	1
	Handa, Sachin	Chemistry, College of Arts & Sciences	1
	Harnett, Cindy	Electrical & Computer Engineering, JB Speed School of Engineering	1
	Himes, Paul	Biology, College of Arts & Sciences	1
	Hsu, Keng	Mechanical Engineering, JB Speed School of Engineering	1
	Jayanthi, Chakram	Physics & Astronomy, College of Arts & Sciences	1
	Kate, Kunal	Mechanical Engineering, JB Speed School of Engineering	1
	Lian, Yongsheng	Mechanical Engineering, JB Speed School of Engineering	1
	Liu, Jinjun	Chemistry, College of Arts & Sciences	1
	McGinley, Mark	Civil & Environmental Engineering, JB Speed School of Engineering	1
	McIntyre, Michael	Electrical & Computer Engineering, JB Speed School of Engineering	1
	McNamara, Shamus	Electrical & Computer Engineering, JB Speed School of Engineering	1
	Mendes, Sergio	Physics & Astronomy, College of Arts & Sciences	1
	Naber, John	Electrical & Computer Engineering, JB Speed School of Engineering	1
	Nanz, Mike	Chemistry, College of Arts & Sciences	1
	Narayanan, Badri	Mechanical Engineering, JB Speed School of Engineering	1
	Nasraoui, Ofa	Computer Science & Engineering, JB Speed School of Engineering	1
	Park, Sam	Mechanical Engineering, JB Speed School of Engineering	1
	Prater, Glen	Mechanical Engineering, JB Speed School of Engineering	1
	Ramazanipour, Farshid	Chemistry, College of Arts & Sciences	1
	Rockaway, Thomas	Civil & Environmental Engineering, JB Speed School of Engineering	1
	Running, Mark	Biology, College of Arts & Sciences	1
	Sathitsuksanoah, Noppadon	Chemical Engineering, JB Speed School of Engineering	1
	Schultz, David	Biology, College of Arts & Sciences	1
	Slarr, Thomas	Chemical Engineering, JB Speed School of Engineering	1
	Sun, Zhihui	Civil & Environmental Engineering, JB Speed School of Engineering	1
	Tseng, Michael	Anatomical Sciences & Neurobiology, School of Medicine	1
	Walsh, Kevin	Electrical & Computer Engineering, JB Speed School of Engineering	1
	Wang, Hui	Mechanical Engineering, JB Speed School of Engineering	1
	Willing, Gerold	Chemical Engineering, JB Speed School of Engineering	1

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Yang, Li	Industrial Engineering, JB Speed School of Engineering	1
Yu, Ming	Physics & Astronomy, College of Arts & Sciences	1
Zamborini, Frank	Chemistry, College of Arts & Sciences	1
CENTER STAFF		18
Akram, Muhammad Zain	Postdoctoral Associate	1
Druffel, Thad	Sr. Research Scientist/Engineer	1
Jasinski, Jacek	Sr. Research Scientist/Engineer	1
Li, Yang	Postdoctoral Associate	1
Marsh, Andrew	Assistant Director/Program Officer	1
Menon, Madhusudan	Research Scientist	1
Mishra, Roshan	Postdoctoral Associate	1
Pakanati, Siva Chandra Sekhar	Postdoctoral Associate	1
Paxton, William "Hank"	Research Scientist/Engineer	1
Ren, Keming	Postdoctoral Associate	1
Salazar, Eunice	Unit Business Manager	1
Satyavolu, Jagannadh	Sr. Research Scientist/Engineer	1
Spurgeon, Joshua	Sr. Research Scientist/Engineer	1
Sumanasekera, Gaminii	Theme Leader; Physics & Astronomy, College of Arts & Sciences	1
Sunkara, Mahendra	Director; Chemical Engineering, JB Speed School of Engineering	1
Tadimeti, Jogi Ganesh Dattatreya	Postdoctoral Associate	1
Thapa, Arjun	Research Manager	1
Thilakaratne, Chamila Rajeeva	Postdoctoral Associate	1
VISITING SCHOLARS		3
Boczar,Maciej	Visiting PhD Scholar, POLAND	1
Liang,Ying	Research Scholar, CHINA	1
Macewicz,Lukasz	Visiting PhD student Scholar, POLAND	1