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Industry Liaison, Neutron Industrial Application Program.
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SUMMARY

In charge of the NScD Materials and Engineering Science Initiative and Industrial Applications Program in promoting the engagement of academic industrial users in use of neutrons to solve fundamental materials science and critical engineering problems. In charge of the state-of-the-art engineering diffractometer, VULCAN, at the world most intense pulse based spallation neutron source, Oak Ridge National Laboratory, and point of contact of new materials engineering instrument MENUS at the second target station. Engaged in materials science studies by neutron scattering. Specialized in structural and functional materials behaviors under complex environments, and performance, stability and dynamics of energy storage and conversion materials.

RESEARCH INTERESTS

Research interests and activities are in neutron scattering studies of material systems under temperature, magnet, current, and complex loading, etc.; electrochemical performance, durability and reliability of energy storage/conversion materials; residual stress; fatigue life prediction of structural materials under complex loading; and scientific instrumentation and scientific software development.

Current research includes residual stress and deformation behavior of structural materials including high entropy alloys, additively manufactured alloys, high strength steel, lightweight alloys; deformation and structural (phase/twinning) transition magnetic shape memory materials; thermal mechanical integrity of critical engineering materials by high spatial resolution neutron diffraction; synthesis, structure, stability and degradation of energy storage and energy conversion materials.

EDUCATIONS

- **Ph.D**. in Engineering Mechanics, Department of Engineering Science and Mechanics, Virginia Tech, 2003.
- **M.S.**, in Machinery of Chemical Engineering Processing, Department of Chemical Engineering, Tianjin University, 2000

- **B.S.**, in Chemical Engineering Machinery and Equipment, Department of Chemical Engineering, Tianjin University, 1998
- **B.S.**, in Engineering Economics, Department of Management, Tianjin University, 1998

PROFESSIONAL EXPERINCES

- Coordinator, M&E Science Initiative, NScD, ORNL, 2017-present.
- Industry Liaison, Industry applications program (IAP), ORNL, 2016- present.
- Lead Scientist/POC, VULCAN, Spallation Neutron Source, ORNL, 2011-present.
- New materials and engineering instrument POC, MENUS, Second Target Station, ORNL.
- Adjunct Faculty, Department of Materials Science, University of Tennessee, Knoxville, 2012, 12-present.
- Staff R&D Scientist / Instrument Scientist, VULCAN, Spallation Neutron Source, ORNL, 2008-2011.
- Research Associate, NRSF2/VULCAN, High Flux Isotope Reactor/Spallation Neutron Source, ORNL, 2005-2008.
- Research Visitor, NRSF2, ORNL Advanced Short Term Research Opportunity, 2004.
- Graduate Research Assistant, Department of Engineering Science and Mechanics, Virginia Tech, 2001-2003.
- Graduate Research Assistant, Department of Chemical Engineering, Tianjin University, China, 1998-2000.

HONORS/AWARDS

1. Top 10 Neutron Scattering Achievements of 2020. "Crystallographic orientation and spatial resolved damage in a dispersion-hardened Al alloy", ***Acta Materialia***,193, pp 138-150 (2020).
2. Top 10 Neutron Scattering Achievements of 2020, "Ultra-Lithium-Rich Disordered Rocksalt Anode for Fast-charging Lithium-Ion Batteries", ***Nature***, 585 (7823), pp 63-67, (2020).
3. Outstanding Reviewer Award, Acta and Scripta Materialia, 2019
4. Supplemental Performance Award, NSD, ORNL, 2019
5. NSD best paper award, 2019, “Lattice-Cell Orientation Disorder in Complex Spinel Oxides”, ***Advanced Energy Materials***, 7, (2017).
6. Top 10 Neutron Scattering Achievements of 2019. “Understanding hydrogen, lithium ionic mobility in aqueous-lithium metal batteries” in paper "Elucidating the mobility of H+ and Li+ ions in (Li6.25-xHxAl0.25)La3Zr2O12 via correlative neutron and electron spectroscopy", ***Energy & Environmental Science***, 12 (3), 945-951, 2019.
7. Outstanding Reviewer Award, Acta Materialia, 2018
8. Outstanding Reviewer Award, Journal of Power Source, 2018
9. Outstanding Reviewer Award, International Journal of Fatigue, 2018
10. Top 10 discoveries in ORNL neutron scattering, “Path to better engineering alloys revealed”, in paper “Deformation mechanisms and work-hardening behavior of transformation-induced plasticity high entropy alloys by in-situ neutron diffraction”, ***Materials Research Letters***, 6, 7, (2018).
11. Supplemental Performance Award, NSD, ORNL, 2018

12. Outstanding Reviewer Award, Solid State Ionics, 2017
13. Significant Event Award, ORNL, 2013
14. Siemens Teachers as Researchers Mentor Performance Award, 2011
15. Supplemental Performance Award, NSSD, ORNL, 2009.
16. Excellence in Science and Technology Research and Development, Ministry of Education, China. "A Study on Low Cycle Fatigue of Metal Materials under Multiaxial Nonproportional Loading". 2003
17. Excellence in Science and Technology Research and Development, Government of Tianjin City, China. "Life Prediction of Multiaxial Low Cycle Fatigue for Metal Materials", 2002.
18. Excellent students honor (Top 2 %) to start scientific project in junior year, 1996.
19. "Liu Lihua" Scholarship, Tianjin University 1999;
20. Dow Chemical Co. Scholarship, Tianjin University 1996;
21. Ding Hsin International Consult co., Ltd. Scholarship, Tianjin University 1996;
22. Tianjin University Annual scholarships for excellent students, 1995-1999.

PROFESSIONAL AND SYNERGISTIC ACTIVITIES

- **Committee of APS review panel**, Triennial Review of Advanced Photon Source, Argonne National Laboratory, a DOE BES user facility, TBD, postponed due to the pandemic.
- **Co-organizer**, Symposium on Materials Characterization and Modeling, 2021 WCX Digital Summit, April 13-15, 2021, Detroit, MI
- **Reviewer**, APS Science Advisory Committee Review of Materials Physics and Engineering Group Beamlines, Advanced Photon Source, April 5-6, 2021.
- **Panelist**, DOE SBIR PI meeting, Oct 13-15, 2020,
- **ORNL Coordinators of "First Experiments" Chapters**, FIRST EXPERIMENTS: New Science Opportunities at the Spallation Neutron Source Second Target Station, 2019
- **Session Chair**, High Entropy Alloys VIII, Structures and Characterization, TMS 2020, Feb, San Diego.
- **Co-organizer** and **session chair**, Materials and Engineering theme in 2019 Neutron User Meeting, Oak Ridge, TN, June, 2019.
- **Co-organizer,** Neutron Scattering for Nuclear Power Workshop, SNS, Oak Ridge, TN, May, 2019.
- **Co-organizer**, Symposium on Materials Characterization and Modeling, 2020 WCX SAE World Congress Experience, April 21-23, 2020, Detroit, MI
- **Committee**, International Scientific and Technical Advisory Panel for the Materials and Engineering Diffractometer Instrument at CSNS, 2018-.
- **Committee**, The Minerals, Metals & Materials Society, Structural Materials Division, Mechanical Behaviors of Materials Committee 2013-.
- **Committee**, The Minerals, Metals & Materials Society, Structural Materials Division, Materials Characterization Committee 2018-.
- **International Scientific Committee,** MECASENS, International Conference on Mechanical Stress Evaluation by Neutron & Synchrotron Radiation, 2016 - present.
- **Committee**, The Minerals, Metals & Materials Society, Young Professional Committee 2013-2016.

- **Committee**, Scientific and Technical Advisory Panel (STAP) for the Materials and Engineering Diffractometer Instrument at ESS, 2013-2016.
- **International Scientific Committee,** 2016 International Symposium on Structural Integrity, Tianjin, China, 2016.
- **Organizer/chair** of "Symposium of Deformation, Damage, and Fracture of Light Metals and Alloys" in The Minerals, Metals & Materials Society (TMS) annual meetings, 2012-2014,
- **Co-organizer** of "Nanocomposites: Synthesis, Processing, Characterization, and Modeling" in McMat 2015, June 29-July 1, Seattle, WA.
- **Session chair,** MECASENS, Grenoble, France, Sept 28-Oct 2, 2015.
- **Session co-organizer** "Neutron Diffraction, Radiography and Computed Tomography: Applications to Industrial Research" in ASNT Annual Conference, Salt Lake City, Utah 2015.
- **Committee**, ORNL Laboratory Directed Research and Development Fund, 2015.
- **Chair**, High Temperature Sample Environments Steering Group of NScD, 2015-2017
- **Committee**, High Temperature Sample Environments Steering Group of NScD, 2017-
- **Committee**, NScD Neutron Laboratories, 2018-.
- **Sub Chair**, **Neutron Data Analysis Plan,** 2019-
- **Committee**, NScD Career Advancement Committee, 2018-2019.
- **Co-Chair** of VULCAN workshop, SNS, ORNL, 2010.
- **Professional Society Affiliation**:
  Neutron Scattering Society of America, American Electrochemistry Society, The Minerals, Metals & Materials Society. Material Research Society, American Society of Mechanical Engineers.
- **Funding Proposal Reviewer:** DOE Early Career Award, Swiss National Science Foundation, Hongkong Research Grants Council. ORNL SEED, LDRD proposals.
- **Editorial assignment:**
  Editorial board member, Scientific Reports, Nature Group 2015-
  Guest editor/key reader, Metallurgical and Materials Transaction A, Special issue, "Deformation, Damage, and Fracture of Light Metals and Alloys", 2014.
  Guest editor, *Crystals*, Special issue "Crystallographic Understanding of Deformation, Phase Transformation, and Recrystallization in Materials Engineering", 2019.
  Guest editor, *Crystals*, Special issue " High-Entropy Materials", 2021.
- **Journal Reviewer:**
  Advanced Materials, Advanced Energy Materials, Additive Manufacturing, Nature Catalysis, Nanoscale, Science Advances, Materials Advances, Acta Materialia, Science Bulletin, Scripta Materialia, Materials Research Letters, Journal of Alloys and Compounds, Journal of Materials Science, Journal of Microelectronics Reliability, International Journal of Fatigue, Materials Letter, Materials Characterizations, Metals, Materials Science Forum, Materials and Design, Journal of Materials Engineering and Performance, Nuclear Engineering and Design, Advanced Engineering Materials, Nanoscale, Nuclear Engineering and Design, Journal of Applied Crystallography, Journal of Power Sources, Inorganic Chemistry, Journal of the American Chemical Society, Chemistry of Materials,

Journal of Electroanalytical Chemistry, ACS Applied Materials & Interfaces, Journal of Physical Chemistry, Electrochimica Acta, Journal of Magnetism and Magnetic Materials, RSC Advances, Solid State Ionics et al.

FUNDED PROJECTS

1. "Operando Neutron Characterization of Metal Additive Manufacturing", ORNL LDRD, Contributor: FY21- FY22.
2. "Residual stress measurement of additively manufactured structure to understand processing parameters influence", FY20-FY21, GE, IAP
3. "Measurement of Residual Stress in Titanium Components due to Cold Dwell Fatigue". Supported by GE global research center, and AFL, FY19-FY20.
4. "Residual Stress Measurement in Aerospace Parts", PW, FY20.
5. "Deformation behavior of 5xxx and 6xxx Al alloys", Fusion ENG. FY19.
6. "Residual Stress Measurement in Additively Manufactured Aerospace Parts", GE global research center, FY20.
7. "Residual Stress Measurement in Single Crystal Ni-base Superalloy Turbine Blade", GE global research center, FY19-FY20.
8. "Thermo-Mechanical Integrity of Critical Engineering Structures by High Spatial Resolution Neutron Diffraction", ORNL LDRD, PI, FY14-16.
9. "Residual Stress Relaxation Determination of Ni-based Superalloys", Work for others proposal FY16-FY17.
10. DOE BES: "Ion Transport and Structural Evolution of Solid Electrolytes", DOE Basic Energy of Science, Co-PI: FY16-FY18. PI on neutron scattering.
11. "Advancing additive manufacturing processes through multi-scale characterization using neutron scattering techniques correlated with mesoscale polycrystal deformation simulations". FY16-FY18.
12. "High-Resolution Small/Wide Angle Neutron Scattering for Atomic-to-Mesoscale Structure in Complex Soft Materials and Biology (HiRes-SWANS)", FY15-FY17.
13. "Structural origins of electrochemical and mechanical properties of preformed SEIs", DOE Basic Energy of Science, Co-PI: FY13-FY15.
14. "Understanding the Performance and Reliability of Large Format Li-Ion Batteries through In-situ Time-resolved Neutron Diffraction 3D Mapping". U.S.-China Clean Energy Research Center (CERC) funding from DOE and Industries, Co-PI, FY13-14.
15. "Expanding ORNL neutron capabilities by increasing spatial resolution at the HFIR CG-1D neutron imaging prototype beamline and co-registering imaging and diffraction data", ORNL LDRD Fund, Co-PI: FY13.
16. "Material Degradation Phenomena and Mitigation for Nuclear Reactor Life Extension". ORNL LDRD Fund, Co-PI: FY11-13.
17. "Asynchronous in-situ neutron scattering measurement of <10 μs transient phenomena at SNS", ORNL LDRD Fund, PI: FY10-FY12.

18. "*In situ* Studies of Solid Electrolyte Interphase on Nanostructured Materials", DOE Basic Energy of Science, Co-PI: FY10-FY12.
19. "Can Neutrons Do It? Probing Performance of Li-Ion Batteries *in-situ",* ORNL SEED LDRD Fund Co-PI: FY10-FY12.
20. "Development of Real-Time Optimization Methods for Neutron Scattering Experiments – Where to Measure and When to Stop", ORNL SEED LDRD Fund, Co-PI: FY10-FY11.

MENTORING AND TEACHING EXPERIENCE

- Instructor of Engineering Neutron Diffraction in annual national X-ray and neutron school, 2010 ~ present.
- PhD thesis committee, Materials Science and Engineering, The University of Tennessee, Knoxville, 2014, 2017, 2019
- PhD thesis committee, Materials Science and Engineering, The University of Utah.2018
- PhD thesis committee co-chair, Tianjin University, Tianjin, China
- PhD thesis committee co-chair, Northeastern University, Shenyang, China
- PhD thesis committee/examiner, the Department of Materials Engineering, The Open University, UK.
- Students and postdocs mentored:

1. Dr. Rui Feng. Materials & Engineering Initiative postdoc, 2020-
2. Mr. Feng Li, PhD student, USTB/SWC/ORNL, high strength steel, 2019-2021.
3. Ms. Emily Kirkman, HERE student. 2019-2020
4. Ms. Sichao Fu, PhD student, Tianjin University/SWC/ORNL, deformation behavior, 2016-2018.
5. Mr. Tingkun Liu, PhD student, University of Tennessee, 2015-2018, co-chair: Yanfei Gao, Hongbin Bei. Now a postdoc at PNNL.
6. Dr. Dunji Yu, postdoc on industrial applications, SWC/ORNL, 2017-2018, Now Scientific Associate, VULCAN, ORNL
7. Dr. Qingge Xie, postdoc on crystal plasticity modeling by LDRD, 2016-2018. Now a faculty member at University of Science and Technology, Beijing, PRC.
8. Mr. Bilin Chen, PhD student, University of Tennessee, Prof P.K. Liaw. On pipe weld degradation, 2013-2017. Now a staff at Nucor Corporation.
9. Dr. Yan Chen, postdoc on energy storage materials study (BES) and NScD user program, 2013-2017. Now neutron scattering scientist at VULCAN, ORNL.
10. Mr. Nathan Smith, PhD student, fellowship awardee of the SCGSR Program 2015, 2016.
11. Ms. Dongmei Wang, PhD student on stress induced phase transformation in bulk metallic glass, Northeastern University, 2015-2017, co-chair: prof Y. Wang. Now a faculty member at Inner Mongolia University of Science & Technology, PRC.
12. Dr. Yuming Qi, Mechanical properties, 2015-2016.
13. Dr. Wei Wu, postdoc on high spatial resolution diffraction of engineering materials, (LDRD), 2014-2015. Now lab lead at GM.

14. Mr. Dan Henn, PhD student, University of Tennessee, part time graduate student on degradation of large format battery, 2014-2015.
15. Mr. Jorge Cisneros, PhD student, Wayne State University, phase transformation of alloys, summer, 2013, supported by RAMS program of DOE.
16. Dr. Cai Lu, postdoc on energy storage materials study (BES), 2010-2013. Now materials scientist at Idaho National Laboratory.
17. Dr. Abhijit Pramanick, postdoc on transient phenomena of material (LDRD), 2010- 2013. Now faculty member at Department of Materials Science and Engineering, City University of Hong Kong.
18. Dr. Ling Yang, postdoc on stability of solid oxide fuel cell materials and scientific computing, 2010-2012.
19. Ms. Hui Yang, PhD student Beijing Institute of Technology/UTK, China, 2012-2015. Prof. Y. Wang, Dr. Mandrus, Dr. Yan. Now faculty member at School of Materials Science and Engineering, Jiamusi University, PRC
20. Mr. Dunji Yu, PhD student ORNL / Tianjin University/, China, 2012-2014, co-chair: Prof. Xu Chen.
21. Mr. Wei Wu, PhD student, University of Tennessee, co-chair: prof P.K. Liaw. On Mg deformation mechanism, 2011-2014.
22. Mr. Tao Zou, PhD student, Institute of Physics, Chinese Academy of Science, Aug. 2011-Jan. 2012 sponsored by LDRD.
23. Mr. Yan Chen, PhD student, summer, 2012, University of Central Florida, Prof. Nina Orlovskaya.
24. Mr. Ercan Cakmak, PhD student University of Tennessee, Prof Hahn Choo, 2010.
25. Ms. Dan Jia, summer student, 2010, PhD candidate of University of North Carolina, Charlotte, Prof. Aixi Zhou.
26. Mr. Patrick Tae, Mr. Sam Worley and Mr. Sam Snodgrass, Oak Ridge High School thesis program 2010 on LDRD asynchronous neutron measurement.
27. Mr. Patrick Tae, DOE Higher Education Research Experience Program, Brown University, mechanical and sans measurement of PEM electrolyte at elevated temperature, summer 2011.
28. Mr. Sam Worley, Virginia Tech, summer, 2011.
29. Mr. Sam Snodgrass, Georgia Tech, summer, 2011.

VISITING SCHOLARS

1. Prof. Dan Jin, Institute of Shenyang Chemical and Engineering 2016 Dec.-2018 June.
2. Prof. Gang Chen, Tianjin University, 2014 Apr.-Oct.
3. Prof. Qizhen Li, University of Nevada, Reno, 2013 Aug-Dec.
4. Prof. Xu Chen, Tianjin University, Jan-Apr, 2011, sponsored by LDRD.
5. Prof. Hong Gao, Tianjin University, Sept.2011- Aug. 2012.

INVENTION PATENT

1. Lara-Curzio, E., **An, K**., Dudney, N., Baker, F. S., Armstrong, B., Contescu, C. I., and Kiggans, J, "Lightweight, durable lead-acid batteries" (U.S. Patent No. 8,017,273, Sept, 13, 2011).

SELECTED NEWS RELEASES/WEB HIGHLIGHTS

1. **Even Superalloys Get Creeped Out From Stress**, (https://www.energy.gov/science/bes/articles/even-superalloys-get-creeped-out-stress)
2. **A cousin of table salt could make energy storage faster and safer** (https://neutrons.ornl.gov/content/a-cousin-table-salt-could-make-energy-storage-faster-and-safer)
3. **New engine capability accelerates advanced vehicle research**, (https://neutrons.ornl.gov/content/new-engine-capability-accelerates-advanced-vehicle-research)
4. **From Atoms to Materials: Using Computational Tribology and Materials Science to Understand Bearing Steels**, featured highlight of Timken work on VULCAN, to be appeared in TLT magazine, Oct. 2020.
5. **West Virginia researchers use neutrons to study materials for power plant improvements**, https://neutrons.ornl.gov/content/west-virginia-researchers-use-neutrons-study-materials-power-plant-improvements
6. **Princeton uses neutrons to squeeze possibilities for piezoelectrochemical self-charging technologies**, (https://neutrons.ornl.gov/content/princeton-uses-neutrons-squeeze-possibilities-piezoelectrochemical-self-charging)
7. **ORNL–Eck Industries partnership fast-tracks high-performance alloys to market**, (https://neutrons.ornl.gov/content/ornl–eck-industries-partnership-fast-tracks-high-performance-alloys-market)
8. **Enhanced strength and ductility in a high-entropy alloy via ordered oxygen complexes** (https://phys.org/news/2018-11-strength-ductility-high-entropy-alloy-oxygen.html)
9. **Neutrons—Fueling better power** (https://www.ornl.gov/news/neutrons-fueling-better-power)
10. **Neutron pinhole magnifies discoveries at Oak Ridge National Laboratory**, (https://neutrons.ornl.gov/content/neutron-pinhole-magnifies-discoveries-oak-ridge-national-laboratory)
11. **Neutrons analyze advanced high-strength steels to improve vehicle safety and efficiency**, https://phys.org/news/2018-07-neutrons-advanced-high-strength-steels-vehicle.html
12. **New family of aluminum-cerium alloys shows significantly improved high-temperature performance, economic benefits** (https://www.greencarcongress.com/2017/12/20171205-alce.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+greencarcongress%2FTrBK+%28Green+Car+Congress%29)
13. **Neutrons peer into a running engine**, https://neutrons.ornl.gov/content/neutrons-peer-running-engine
14. **Honeywell and NASA are studying residual stress using VULCAN** https://neutrons.ornl.gov/content/honeywell-and-nasa-are-studying-residual-stress-using-vulcan
15. **Neutrons offer guide to getting more out of solid-state lithium-ion batteries**, (https://www.ornl.gov/news/neutrons-offer-guide-getting-more-out-solid-state-lithium-ion-batteries).

16. **VULCAN Users from Columbia University Study Suspension Bridge Cable Design** (http://neutrons.ornl.gov/news/suspension-bridge-cable-design)
17. **Big Science tools for clean transportation: neutron scattering at ORNL**, (http://www.greencarcongress.com/2013/08/20130821-neutrons.html)
18. **Neutron scattering measures samples too hot to hold**, (http://neutrons.ornl.gov/research/highlights/NESL-levitator.html)
19. **Photo of the week,** *DOE office of science site* (http://energy.gov/articles/photo-week-vulcan-diffractometer)
20. **DOE secretary Ernest Moniz Visited VULCAN** (http://www.flickr.com/photos/oakridgelab/8939216481/).
21. **Far beyond cookware - Corning Inc. uses Spallation Neutron Source's VULCAN to test limits of ceramic material for car emission controls, filtration devices,** *ORNL features* (http://www.ornl.gov/info/features/get_feature.cfm?FeatureNumber=f20120606-00)
22. **Neutron scattering charts moves of memory-shape alloys that change structure in response to environmental cues** (http://phys.org/news/2012-05-neutron-memory-shape-alloys-response-environmental.html#jCp)
23. **Neutrons Probe Inner Workings of Batteries-Designing long-lasting, reliable batteries is the key to wider acceptance of electric vehicles**, *REVIEW*, Volume 44, Number 3, 2011.
24. **New VULCAN tests of Japanese cable for US ITER's central magnet system-Past tests showed cable degradation under cyclic power loading conditions** (http://neutrons.ornl.gov/research/highlights/VULCAN/an-vulcan-iter-japanese-cable.shtml)
25. **Spallation Neutron Source user finds 'perfect instrument' for materials research** (http://phys.org/news/2011-03-spallation-neutron-source-user-instrument.html)
26. **Neighbor lends a hand: Spallation Neutron Source's tool to probe ITER's superconducting cable** (http://phys.org/news/2011-01-neighbor-spallation-neutron-source-tool.html)
27. **VULCAN Fires Up Research Across a Range of User Problems** (http://neutrons.ornl.gov/research/highlights/VULCAN/startup_capability_VULCAN.shtml).
28. **Neutrons peer running engine** In ORNL **Review**, and ***Advanced Materials and Processes 2017, etc.*** https://neutrons.ornl.gov/content/neutrons-peer-running-engine
29. **Honda Probes Residual Stress Distribution in Complex 3D-Printed Automobile Structures** (https://neutrons.ornl.gov/highlights/honda-probes-residual-stress-distribution-complex-3d-printed-automobile-structures)

PUBLICATIONS

Full publications list https://orcid.org/0000-0002-6093-429X

SELECTED JOURNAL LIST OF PUBLICATIONS.

Journals	Impact factors	Publications
Nature [*+]	**42.778**	**3**
Energy & Environmental Science	**30.289**	**1**
Advanced Materials [*]	**27.398**	**3**
Joule	**27.05**	**1**
Advanced Energy Materials	**25.245**	**3**
ACS Energy Letters	**19.003**	**2**
Science Advances	**13.116**	**1**
Angewandte Chemie-International Edition [*]	**12.959**	**1**
Materials Horizons	**12.319**	**1**
Nature Communications	**12.121**	**3**
Journal of Materials Chemistry A	**11.301**	**6**
Chemistry of Materials	**9.567**	**3**
PNAS [*]	**9.412**	**1**
Carbon	**8.821**	**1**
ACS Applied Materials and Interfaces	**8.758**	**6**
Journal of Power Sources	**8.247**	**4**
ACS Sustainable Chemistry & Engineering	**7.632**	**1**
Acta Materialia [#]	**7.293**	**16**
Additive Manufacturing	**7.0**	**1**
Materials Research Letters	6.6	3
International Journal of Plasticity	6.49	2
Materials and Design	6.289	4
Electrochimica Acta	6.215	1
Scripta Materialia [#]	5.079	13
MRS Bulletin	5.061	1
Applied Physics Letters [*]	3.597	6

[*]DOE high impact journals. [+]DOE high profile journals. [#]Prestigious journals in Materials Engineering. The bolded publications with JIF>7 as well as the noted ones are ~39% of the total co-authored journal publications. As of April. 2021, >190 journal publications (~30% of them are co-authored as (co-) corresponding author), 13 conference proceeding papers, 12 technical reports, >150 national/international presentations are with the use of neutron instruments including VULCAN, POWGEN, NOMAD, HIDRA (NRSF2), POWDER, TOPAZ, HIFR Imaging, SNAP, GP-SANS, EQ-SANS, VISION, BASIS, and a number of scientific software including the widely used VDRIVE.