Anjani Kumar Maurya, PhD

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Research and Work Experience

SLAC National Accelerator Laboratory, Stanford University, California, USA
Associate Staff Scientist Dec 2025 – Present

- Establishing a soft-matter research program that uses SLAC's X-ray light sources (the SSRL synchrotron and the LCLS X-ray free-electron laser) to link multiscale structure to material performance.
- Leading the X-ray characterization work for SLAC in the DOE BOTTLE consortium, using structure–processing–property studies to guide processing of redesigned recyclable and bio-based polymers, in partnership with the National Laboratory of the Rockies (NLR, formerly NREL), Colorado State University, and Stanford University.
- Leading research on autonomous, AI/ML-guided X-ray experiments at SSRL, combining real-time data analysis with closed-loop control of sample environments.
- Developing a new research direction in *operando* X-ray scattering of nanofiltration membranes for critical-mineral separations from battery-recycling streams and natural sources.

Postdoctoral Research Fellow May 2021 – Nov 2025

- Developed simultaneous *in situ* SAXS/WAXS methods to track polymer structure during chemical deconstruction, establishing that morphology governs solvent and catalyst accessibility.
- Determined how crystallinity and chain orientation govern the mechanics of redesigned bioplastics and mixed polyesters to inform recyclable-polymer design and closed-loop recycling.
- Designed and built *in situ* sample environments (tensile, high-temperature/high-pressure, and reaction cells) at SSRL beamlines 1-5, 11-3, and 17-2, together with real-time data-reduction software now used in autonomous experiments.
- Applied ultrafast X-ray pump–probe scattering at LCLS (XPP) to study transient melting in metal films and radiolysis of liquid CO_2.

Empa, Swiss Federal Laboratories for Materials Science and Technology (ETH Domain), Switzerland
Doctoral Researcher Mar 2017 – Mar 2021
PhD Thesis: Multiscale structural decoding of fibers and designing responsive nanofibrous materials

- Introduced a multiscale X-ray framework (SAXS/WAXS with micro-CT) to quantify orientation and semicrystalline order in fibrous materials from the nanometer to the millimeter scale.
- Applied this framework to relate processing, molecular orientation, and mechanical properties in electrospun nanofibers, thermally drawn fibers, protective textiles, and mineralized tendon.
- Designed and performed *in situ* SAXS/WAXS experiments at synchrotron facilities and on laboratory instruments under microfluidic, tensile, thermal, electrical, and humidity stimuli.
- Tracked the nucleation and growth of iron oxide nanoparticles by X-ray scattering during microfluidic synthesis.

Technical University of Munich (TUM), Germany
Master's Thesis Researcher Oct 2015 – Nov 2016
Master's Thesis: Optimization of the thermoelectric properties of conducting polymer thin films by dedoping and hybrid approaches

- Improved the thermoelectric performance of PEDOT:PSS thin films through acid–base and redox dedoping with readily available salts.

– Measured in-plane and cross-plane Seebeck coefficients and electrical conductivity to relate film processing and structure to thermoelectric performance.
– Explored hybrid film approaches to further raise the Seebeck coefficient.

Infineon Technologies AG, Neubiberg, Germany
Materials Simulation Engineer (part-time), Package Simulation Team Nov 2015 – Feb 2017

– Built finite-element material models (COMSOL Multiphysics, Ansys) and MATLAB/Python tools to benchmark packaging simulations against experimental data.
– Maintained the materials database used across the team's packaging simulations.

Laboratoire Kastler Brossel, UPMC–ENS, Paris, France
Summer Research Intern May 2015 – Aug 2015

– Fabricated optical microfiber knot/loop resonators for coupling to quantum dots to study light–matter interactions.

Indian Institute of Technology Guwahati (IITG), India
Undergraduate Researcher May 2011 – May 2014

– Fabricated and characterized ultra-thin silicon films by HWCVD and PECVD; used DFT to study electric-field-induced band-gap tuning in bilayer graphene and silicene.

Education

Stanford Ignite, Stanford Graduate School of Business, Stanford, CA, USA Jun 2023 – Jul 2023
Full-time certificate program in innovation and entrepreneurship (strategy, finance, accounting, marketing, operations, economics); developed a commercialization plan for a new venture.

PhD, University of Bern, Switzerland Mar 2017 – Mar 2021
Biomedical Engineering, *summa cum laude*; doctoral research conducted at Empa (ETH Domain)

MSc (M2), Technical University of Munich (TUM), Germany Oct 2015 – Nov 2016
Applied and Engineering Physics, Erasmus Mundus (MaMaSELF)

MSc (M1), University of Rennes 1, France Sep 2014 – Aug 2015
Physics, Erasmus Mundus (MaMaSELF)

B.Tech, Indian Institute of Technology Guwahati (IITG), India Jul 2010 – Jun 2014
Engineering Physics

Awards and Honors

– Protein Science Best Paper Award, The Protein Society (2024), for the paper "Understanding the Stability of a Plastic-Degrading Rieske Iron Oxidoreductase System."
– Young Scientist Financial Support, selected by the SAS2022 Organizing Committee, 18th International Small-Angle Scattering Conference, Campinas, Brazil (Jun 2022).
– IUCr Young Scientists Award, EPDIC17 (Feb 2020).
– Best Poster Award, EXCITE Biomedical Imaging Summer School, ETH Zurich (Sep 2018).
– Erasmus+ Scholarship, European Union, for Master's studies at TUM, Germany (2015–2016).
– World Quantitative and Science Scholarship, WorldQuant Foundation (2014–2015); international award to outstanding students in science and quantitative fields.
– Institute Merit-cum-Means Scholarship, IIT Guwahati (2012–2014).

Publications

Journal articles: 23 published (full list in Appendix).
Also: 1 accepted peer-reviewed workshop paper (AI4Mat, NeurIPS 2026) and 4 published conference abstracts (Appendix).
755 citations; h-index 15; i10-index 17 (Google Scholar, Oct 2026).

Talks and Presentations

Invited talks and seminars

- "BOTTLE: Biaxial Thermomechanical Testing," invited talk, Film Technical Committee, Association of Plastic Recyclers (APR), virtual (Dec 3, 2026; scheduled).
- "Multiscale Structural Investigations Using SAXS and WAXS: From Measurement Fundamentals to Autonomous Experiments," invited talk, SLAC–Stanford Battery Center Seminar, SLAC, Menlo Park, CA (Oct 16, 2026).
- "Characterization-Informed Processing of Redesigned Polymers," invited talk, DOE BOTTLE Consortium All-Hands Meeting, Golden, CO (Jul 9, 2026).
- "Rational Process Design Through Characterization" and "In Situ Tensile Measurement on Redesigned Plastic Substrates," two talks, DOE BOTTLE Consortium All-Hands Meeting (Jun 2025).
- "Small-Angle X-ray Scattering (SAXS) for In Situ Structural Investigations: Insights, Challenges, and Future Prospects," SSRL Seminar, Stanford Synchrotron Radiation Lightsource, SLAC, Menlo Park, CA (Apr 10, 2025).

Contributed presentations

- 26 contributed presentations (11 oral, 15 poster) at major venues including the APS Global Physics Summit (2025, 2026), the ACS Spring Meeting (2025), SAS2022 (Brazil), ECM32 (Austria), the DPG Spring Meeting (Germany), and Swiss Crystallography Meetings; full list in the Appendix.

Research Collaborations

International: University of Bern (ARTORG Center), Switzerland; Tohoku University (AIMR), Japan. **National:** DOE BOTTLE Consortium (National Laboratory of the Rockies; Colorado State University); Stanford University; Argonne National Laboratory (Advanced Photon Source); Rice University.

Professional Service

Reviewing

- Expert Reviewer, U.S. Department of Energy Office of Science Graduate Student Research (SCGSR) Program, 2026 Solicitation 1 (administered by ORISE).
- Reviewing Editor, Springer Nature Reviewer Communities (Materials), elevated from Trusted Reviewer in recognition of review contributions (2025–present).
- Journal Peer Reviewer (2024–present): Communications Materials, Scientific Reports (Nature Portfolio); Cellulose, Journal of Cluster Science (Springer); ChemSusChem (Wiley); Soft Matter (RSC); Micro and Nanostructures, Journal of Molecular Structure (Elsevier).

Organizing and leadership

- Planning Committee Member, ESD AI Discussion Series, Energy Sciences Directorate, SLAC (2026–present): co-organize a seminar series on practical use of AI tools in scientific research.
- Seminar Host and Organizer, SLAC: Special ESD Seminar on AI/ML workflows in polymer materials synthesis and advanced manufacturing (Oct 2026); SLAC Battery Seminar on carbon architectures for energy applications (Jun 2026).
- Industry Engagement: hosted a technical exchange with Labric (research-data automation startup) on data infrastructure, instrument integration, and agentic workflows for autonomous X-ray experiments (Oct 2026).
- Session Chair, Colloids and Polymers 3, SAS2022, Campinas, Brazil (Sep 2022).

Outreach and volunteering

- SLAC outreach: STEM Community Day volunteer (Oct 2024; 1,300+ attendees); Family Day Tour Team (Aug 2023; 1,000+ attendees).
- Earlier volunteering: Bio-X, Empa (2018); SolTech (2016); Technothlon city representative (2011); International Conference on Advanced Nanomaterials and Nanotechnology (ICANN) volunteer (2011).

Teaching and Mentoring

Mentoring and supervision

- Mentor, U.S. DOE Science Undergraduate Laboratory Internships (SULI) program, SLAC (Jun–Aug 2026): undergraduate intern from UC Berkeley. Project: a physically motivated model for separating amorphous and crystalline scattering in polymer WAXS; supervised and co-authored the final SULI report.
- Co-mentor (day-to-day supervisor), SULI program, SLAC (Jun–Aug 2026): undergraduate intern from the University of Michigan. Project: autonomous *in situ* X-ray scattering for colloidal nanoparticle synthesis.
- Supervised a Master's thesis (University of Rennes 1, Erasmus Mundus MaMaSELF; 2020).

Teaching

- Taught "Applied Biomaterials" (Master's course, University of Bern); assisted with exams and coursework.

Technical Skills and Instrumentation

X-ray methods: SAXS, WAXS, GISAXS/GIWAXS, XRD, rheo-SAXS/WAXS, ultrafast X-ray pump–probe scattering (XFEL), XAS, micro-CT.
Facilities: SSRL (beamlines 1-5, 2-1, 4-1, 4-2, 9-3, 11-3, 17-2), LCLS (XPP), and APS (12-ID-B), USA; DESY PETRA III (P12), Germany; PSI Swiss Light Source (MS), Switzerland; Diamond Light Source (I15-1), UK.
Sample environments: beamline automation; *in situ* cells for tensile, thermal, high-pressure, microfluidic, continuous-flow, and reaction studies.
Instrument development: biaxial thermomechanical stage for *in situ* X-ray scattering of polymer films (SLAC; design complete, commissioning underway); Anton Paar TS600 tensile stage integrated with SSRL 17-2 for synchronized acquisition; high-temperature, high-pressure capillary cell at SSRL 1-5; *in situ* setups for laboratory SAXS/WAXS; user training and maintenance for the Molmet and Bruker NanoStar instruments (Empa).
Data and computation: Python, MATLAB; real-time SAXS/WAXS reduction pipelines; developer of the SWAXS Platform, an AI-assisted SAXS/WAXS reduction and analysis toolkit; AI/ML-guided experimentation (Bayesian experiment selection, simulation-based inference).
Analysis software: ATSAS, NIKA, SasView, SASfit, BioXTAS RAW, DPDAK, GIXSGUI, FIT2D, TOPAS, PyMOL, Fusion 360.
Materials synthesis and processing: electrospinning, melt-spinning, microfluidic synthesis, spin coating, doctor blading, 3D printing; thin-film deposition (HWCVD, PECVD, RF sputtering, evaporation).
Modeling and simulation: FEM (COMSOL Multiphysics, Ansys), DFT.

Memberships

American Physical Society (2024–present); American Chemical Society (2024–present); Swiss Crystallography Society (2019–present); Swiss Chemical Society (2017–2022); German Physical Society (DPG, 2015–2018).

Languages

Hindi (native); English (full professional proficiency); German (A2); French (A2).

Appendix

Publications (755 citations, h-index 15, i10-index 17, Google Scholar, Oct 2026)

23. **Anjani K. Maurya**, Arun S. Asundi, Sarah A. Hesse, Amani M. Ebrahim, Kevin P. Sullivan, Joel Miscall, Jocelyn A. Richardson, Simon R. Bare, Ritimukta Sarangi, Gregg T. Beckham, Christopher J. Tassone; "Effects of Polymer Morphology on Solvent and Catalyst Accessibility during Polyethylene and Polystyrene Autoxidation," *JACS Au* 6, 2891–2901 (2026). DOI: 10.1021/jacsau.6c00230
22. **Anjani K. Maurya**, Arun S. Asundi, Ozge D. Bozkurt, Katrina M. Knauer, Simon R. Bare, Christopher J. Tassone; "Polymer Deconstruction and Redesign Strategies for Plastics Recycling," *Advanced Materials Technologies* 11, 2502008 (2026). DOI: 10.1002/admt.202502008 (invited contribution to a special issue)
21. Julia B. Curley, Yuanzhe Liang, Jason S. DesVeaux, Taylor Uekert, Hoon Choi, Ryan W. Clarke, William E. Michener, **Anjani K. Maurya**, Lisa M. Stanley, Yue Wu, Sarah A. Hesse, Andrea L. Baer, Hudson A. Neyer, Christopher J. Tassone, Alan J. Jacobsen, Ofei D. Mante, Gregg T. Beckham, Katrina M. Knauer; "Closed-Loop Recycling of Mixed Polyesters via Catalytic Methanolysis and Monomer Separations," *Nature Chemical Engineering* 2, 568–580 (2025). DOI: 10.1038/s44286-025-00275-x
20. Jessica Lusty Beech, **Anjani K. Maurya**, Ronivaldo R. da Silva, Emmanuel Akpoto, Arun S. Asundi, Julia A. Fecko, Neela H. Yennawar, Ritimukta Sarangi, Christopher J. Tassone, Thomas M. Weiss, Jennifer L. DuBois; "Understanding the Stability of a Plastic-Degrading Rieske Iron Oxidoreductase System," *Protein Science* 33, e4997 (2024). DOI: 10.1002/pro.4997 (2024 Protein Science Best Paper Award, The Protein Society)
19. Amy A. Cuthbertson, Clarissa L. Lincoln, Joel Miscall, Lisa M. Stanley, David Moore, **Anjani K. Maurya**, Arun S. Asundi, Christopher J. Tassone, Nicholas A. Rorrer, Gregg T. Beckham; "Characterization of Polymer Properties and Identification of Additives in Commercially Available Research Plastics," *Green Chemistry* 26, 7067–7090 (2024). DOI: 10.1039/D4GC00659C
18. Arun S. Asundi, Amani M. Ebrahim, **Anjani K. Maurya**, Chad T. Palumbo, Kevin P. Sullivan, Gregg T. Beckham, Ritimukta Sarangi; "Effect of Ligand Chemistry on Electronic Properties and Reactivity of Cobalt Acetate Autoxidation Catalysts," *The Journal of Physical Chemistry C* 127, 15797–15808 (2023). DOI: 10.1021/acs.jpcc.3c03216
17. Makenna L. Pennel, **Anjani K. Maurya**, Amani M. Ebrahim, Christopher J. Tassone, Matteo Cargnello; "Intrinsic Activity of Silica–Alumina for the Conversion of Polyethylene into Tunable Aromatics below Pyrolytic Temperatures," *ACS Sustainable Chemistry & Engineering* 11, 12623–12630 (2023). DOI: 10.1021/acssuschemeng.3c02295
16. Fernando Vazquez Luna, **Anjani K. Maurya**, Juliana Martins de Souza e Silva, Guido Dittrich, Theresa Paul, Dirk Enke, Patrick Huber, Ralf Wehrspohn, Martin Steinhart; "Straight versus Spongy: Effect of Tortuosity on Polymer Imbibition into Nanoporous Matrices Assessed by Segmentation-Free Analysis of 3D Sample Reconstructions," *The Journal of Physical Chemistry C* 126, 12765–12779 (2022). DOI: 10.1021/acs.jpcc.2c01991
15. Deeptanshu Sivaraman, Gilberto Siqueira, **Anjani K. Maurya**, Shanyu Zhao, Matthias M. Koebel, Gustav Nyström, Marco Lattuada, Wim J. Malfait; "Superinsulating Nanocellulose Aerogels: Effect of Density and Nanofiber Alignment," *Carbohydrate Polymers* 292, 119675 (2022). DOI: 10.1016/j.carbpol.2022.119675
14. Jean Schoeller, Jonathan Avaro, **Anjani K. Maurya**, René M. Rossi, Antonia Neels; "Tailoring Fibre Structure Enabled by X-ray Analytics for Targeted Biomedical Applications," *Chimia* 76, 229–235 (2022). DOI: 10.2533/chimia.2022.229
13. Robin M. Cywar, Nicholas A. Rorrer, Heather B. Mayes, **Anjani K. Maurya**, Christopher J. Tas-

sone, Gregg T. Beckham, Eugene Y.-X. Chen; "Redesigned Hybrid Nylons with Optical Clarity and Chemical Recyclability," *Journal of the American Chemical Society* 144, 5366–5376 (2022). DOI: 10.1021/jacs.1c12611

12. Neda Iranpour Anaraki, Marianne Liebi, Quy Ong, Clément Blanchet, **Anjani K. Maurya**, Francesco Stellacci, Stefan Salentinig, Peter Wick, Antonia Neels; "In-situ Investigations on Gold Nanoparticles Stabilization Mechanisms in Biological Environments Containing HSA," *Advanced Functional Materials* 32, 2110253 (2022). DOI: 10.1002/adfm.202110253
11. **Anjani K. Maurya**, Eloïse Mias, Jean Schoeller, Giuseppino Fortunato, René M. Rossi, Alex Dommann, Antonia Neels; "Multiscale Structural Decoding of Electrospun Fibers: From Fabrication to Possibilities for Steering Properties," *Nanoscale Advances* 4, 491–501 (2022). DOI: 10.1039/D1NA00503K
10. Inès Richard, **Anjani K. Maurya**, Shahrzad Shadman, Eloïse Masquelier, Lison Sylou Marthey, Antonia Neels, Fabien Sorin; "Unraveling the Influence of Polymer Chain Orientation on the Thermo-Mechanical Properties of Thermally Drawn Fibers," *Small* 18, 2101392 (2022). DOI: 10.1002/smll.202101392
9. **Anjani K. Maurya**, Annapaola Parrilli, Tatiana Kochetkova, Jakob Schwiedrzik, Alex Dommann, Antonia Neels; "Multiscale and Multimodal X-ray Analysis: Quantifying Phase Orientation and Morphology of Mineralized Turkey Leg Tendons," *Acta Biomaterialia* 129, 169–177 (2021). DOI: 10.1016/j.actbio.2021.05.022
8. **Anjani K. Maurya**, Sumit Mondal, Dean E. Wheeldon, Jean Schoeller, Michel Schmid, Simon Annaheim, Martin Camenzind, Giuseppino Fortunato, Alex Dommann, Antonia Neels, Amin Sadeghpour, René M. Rossi; "Effect of Radiant Heat Exposure on Structure and Mechanical Properties of Thermal Protective Fabrics," *Polymer* 222, 123634 (2021). DOI: 10.1016/j.polymer.2021.123634
7. Dambarudhar Parida, Khalifah Salmeia, Amin Sadeghpour, Shanyu Zhao, **Anjani K. Maurya**, Eva Moreau, Robin Pauer, Sandro Lehner, Milijana Jovic, Sabyasachi Gaan; "Template-Free Synthesis of Hybrid Mesoporous Silica Nanoparticle with Phosphonic Acid Functionality for Efficient Methylene Blue Removal," *Materials & Design* 201, 109494 (2021). DOI: 10.1016/j.matdes.2021.109494
6. Tatiana Kochetkova, Cinzia Peruzzi, Oliver Braun, Jan Overbeck, **Anjani K. Maurya**, Antonia Neels, Michel Calame, Johann Michler, Philippe Zysset, Jakob Schwiedrzik; "Combining Polarized Raman Spectroscopy and Micropillar Compression to Study Microscale Structure–Property Relationships in Mineralized Tissues," *Acta Biomaterialia* 119, 390–404 (2021). DOI: 10.1016/j.actbio.2020.10.034
5. Ivana Malagurski, Ruggero Frison, **Anjani K. Maurya**, Antonia Neels, Boban Andjelkovic, Ramsankar Senthamaraikannan, Ramesh B. Padamati, Kevin E. O'Connor, Tomasz Witko, Daria Solarz, Jasmina Nikodinovic-Runic; "Polyhydroxyoctanoate Films Reinforced with Titanium Dioxide Microfibers for Biomedical Application," *Materials Letters* 285, 129100 (2020). DOI: 10.1016/j.matlet.2020.129100
4. Nguyen D. Tien, **Anjani K. Maurya**, Giuseppino Fortunato, Markus Rottmar, Robert Zboray, Rolf Erni, Alex Dommann, René M. Rossi, Antonia Neels, Amin Sadeghpour; "Responsive Nanofibers with Embedded Hierarchical Lipid Self-Assemblies," *Langmuir* 36, 11787–11797 (2020). DOI: 10.1021/acs.langmuir.0c01487
3. Arushi Jain, **Anjani K. Maurya**, Leonie Ulrich, Michael Jaeger, René M. Rossi, Antonia Neels, Philippe Schucht, Alex Dommann, Martin Frenz, H. Günhan Akarçay; "Polarimetric Imaging in Backscattering for the Structural Characterization of Strongly Scattering Birefringent Fibrous Media," *Optics Express* 28, 16673–16695 (2020). DOI: 10.1364/OE.390303
2. **Anjani K. Maurya**, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi,

Martin Frenz, Alex Dommann, Antonia Neels, Amin Sadeghpour; "Structural Insights into Semicrystalline States of Electrospun Nanofibers: A Multiscale Analytical Approach," *Nanoscale* 11, 7176–7187 (2019). DOI: 10.1039/C9NR00446G

1. Nitin Saxena, Josef Keilhofer, **Anjani K. Maurya**, Giuseppino Fortunato, Jan Overbeck, Peter Müller-Buschbaum; "Facile Optimization of Thermoelectric Properties in PEDOT:PSS Thin Films through Acid–Base and Redox Dedoping Using Readily Available Salts," *ACS Applied Energy Materials* 1, 336–342 (2018). DOI: 10.1021/acsaem.7b00334

Conference Proceedings and Abstracts (5: 1 workshop paper, 4 abstracts)

5. Pranav Kakhandiki, Sean Gasiorowski, Samuel Klein, **Anjani K. Maurya**, Christopher J. Tassone; "Simulation Based Inference for Multi-Component Nanoparticle Scattering," AI for Accelerated Materials Design (AI4Mat) Workshop, Conference on Neural Information Processing Systems (NeurIPS 2026; accepted).
4. **Anjani K. Maurya**, Alex Dommann, Antonia Neels; "Multiscale Structural Decoding of Fibrous Materials by SAXS and WAXD," *Acta Crystallographica Section A* 77, C571 (2021) [25th IUCr Congress, Prague]. DOI: 10.1107/S0108767321091236
3. **Anjani K. Maurya**, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Amin Sadeghpour, Antonia Neels; "Multiscale Structural Decoding of Electrospun Nanofibres: From Processing to Possibilities for Steering Functionality," *Acta Crystallographica Section A* 75, e647 (2019) [32nd European Crystallographic Meeting, Vienna]. DOI: 10.1107/S2053273319089095
2. Amin Sadeghpour, Nguyen D. Tien, **Anjani K. Maurya**, Giuseppino Fortunato, Alex Dommann, René M. Rossi, Antonia Neels; "Hierarchical Design of Lipid–Polymer Composite Nanofibres: The Interplay of Multiscale Structures and Biofunctions," *Acta Crystallographica Section A* 75, e587 (2019) [32nd European Crystallographic Meeting, Vienna]. DOI: 10.1107/S2053273319089691
1. Ivana Malagurski, Ruggero Frison, **Anjani K. Maurya**, Jasmina Nikodinovic-Runic, Ramesh B. Padamati, Kevin E. O'Connor, Antonia Neels; "Medium Chain Length (mcl)-PHA-Based Nanocomposites for Biomedical Applications: System Evaluation through XRD," *Acta Crystallographica Section A* 75, e577 (2019) [32nd European Crystallographic Meeting, Vienna]. DOI: 10.1107/S2053273319089794

Conference Presentations (26: 11 oral, 15 poster)

26. **Anjani K. Maurya**, Arun S. Asundi, Ozge D. Bozkurt, Julia B. Curley, Katrina M. Knauer, Gregg T. Beckham, Christopher J. Tassone; "Decoding Structure–Property Relationships in Redesigned Polymers Using In Situ WAXS and Tensile Measurements," oral presentation, APS Global Physics Summit, Denver, CO, USA (Mar 2026).
25. **Anjani K. Maurya**, Arun S. Asundi, Ozge D. Bozkurt, Julia B. Curley, Katrina M. Knauer, Gregg T. Beckham, Christopher J. Tassone; "Chemical Deconstruction of Plastics: Insights from In Situ Simultaneous SAXS and WAXS," oral presentation, APS Global Physics Summit, Anaheim, CA, USA (Mar 2025).
24. **Anjani K. Maurya**, Arun S. Asundi, Sarah A. Hesse, Amani M. Ebrahim, Kevin P. Sullivan, Joel Miscall, Simon R. Bare, Ritimukta Sarangi, Gregg T. Beckham, Christopher J. Tassone; "Unraveling the Impact of Solvents and Catalysts on Plastics in Catalytic Autoxidation: Insights from X-ray Scattering," oral presentation, ACS Spring Meeting, San Diego, CA, USA (Mar 2025).
23. **Anjani K. Maurya**, Arun S. Asundi, Ozge D. Bozkurt, Sarah A. Hesse, Christopher J. Takacs, Ravikumar Ramegowda, Jeremy Luterbacher, Eugene Y.-X. Chen, Gregg T. Beckham, Christopher J. Tassone; "In Situ Synchrotron-Based Characterization of Soft Materials Properties and Behavior," poster presentation, Bay Area Soft Matter Symposium, Stanford, CA, USA (Sep 2023).

22. **Anjani K. Maurya**, Arun S. Asundi, Sarah A. Hesse, Amani M. Ebrahim, Kevin P. Sullivan, Chad T. Palumbo, Allison Z. Werner, Christopher J. Takacs, Gregg T. Beckham, Ritimukta Sarangi, Christopher J. Tassone; "Decoding the Mechanism of Autoxidation Deconstruction Reaction of Plastics by In Situ Simultaneous SAXS and WAXS," oral presentation, SAS2022 International Conference, Campinas, Brazil (Sep 2022).
21. **Anjani K. Maurya**, René M. Rossi, Alex Dommann, Antonia Neels; "Unraveling the Multiscale Structure of Fibrous Materials by X-ray Scattering Techniques," oral presentation, 17th European Powder Diffraction Conference (EPDIC17), Šibenik, Croatia (May–Jun 2022; postponed from 2020; presented by A. Neels).
20. **Anjani K. Maurya**, Eloïse Mias, Jean Schoeller, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Multiscale Structural Decoding of Electrospun Fibers: From Processing to Possibilities for Steering Properties," oral presentation, Empa PhD Symposium 2020, St. Gallen, Switzerland (Nov 2020).
19. **Anjani K. Maurya**, Amin Sadeghpour, Ruggero Frison, Riccardo Innocenti Malini, Claudio Toncelli, Marc G. Willinger, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Nucleation and Growth Study of Iron Oxide Nanoparticles from Solution for Biomedical Application," poster presentation, GCB Symposium, University of Bern, Bern, Switzerland (Jan 2020).
18. **Anjani K. Maurya**, Amin Sadeghpour, Ruggero Frison, Riccardo Innocenti Malini, Claudio Toncelli, Marc G. Willinger, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Nucleation and Growth Study of Iron Oxide Nanoparticles from Solution," poster presentation, Empa PhD Symposium 2019, Switzerland (Nov 2019).
17. Nguyen D. Tien, **Anjani K. Maurya**, Robert Zboray, Giuseppino Fortunato, Markus Rottmar, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels, Amin Sadeghpour; "Electrospun Nanofibers with Embedded Bioinspired Membranes," poster presentation, Bioinspired Materials Conference, Monte Verità, Ascona, Switzerland (Oct 2019).
16. **Anjani K. Maurya**, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Amin Sadeghpour, Antonia Neels; "Understanding Fiber Fabrication Process by Structural Feedback from SAXS and WAXD," poster presentation, 32nd European Crystallographic Meeting (ECM32), Vienna, Austria (Aug 2019).
15. **Anjani K. Maurya**, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Amin Sadeghpour, Antonia Neels; "Decoding Structural Insights of Nanofibers by SAXS and WAXD," oral presentation, Swiss Crystallography Meeting 2019, EPFL, Sion, Switzerland (Aug 2019).
14. **Anjani K. Maurya**, Amin Sadeghpour, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Decoding Structural Insights into Semicrystalline States of Polymeric Nanofibers at the Nanoscale," poster presentation, Empa PhD Symposium 2018, Switzerland (Nov 2018).
13. **Anjani K. Maurya**, Amin Sadeghpour, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Structural–Morphological Correlation Studies in Polymeric Nanofibers by SAXS and WAXD," poster presentation, Polycoll 2018, EPFL, Lausanne, Switzerland (Oct 2018).
12. **Anjani K. Maurya**, Amin Sadeghpour, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Effect of Nanofiber Fabrication Processes on the Internal Structure at the Nanoscale," poster presentation, Swiss Crystallography Meeting 2018, PSI, Villigen, Switzerland (Sep 2018).
11. **Anjani K. Maurya**, Amin Sadeghpour, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato,

René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Structural Insights into Semicrystalline States of Electrospun Nanofibers," poster presentation, EXCITE Biomedical Imaging Summer School 2018, ETH Zurich, Zurich, Switzerland (Sep 2018) (Best Poster Award).

10. **Anjani K. Maurya**, Amin Sadeghpour, Lukas Weidenbacher, Fabrizio Spano, Giuseppino Fortunato, René M. Rossi, Martin Frenz, Alex Dommann, Antonia Neels; "Structure–Morphology Correlation Studies of Electrospun Nanofibers by SAXS and WAXS," poster presentation, Bio-X Symposium, Empa, St. Gallen, Switzerland (Mar 2018).
9. **Anjani K. Maurya**, Amin Sadeghpour, René M. Rossi, Alex Dommann, Antonia Neels; "Structural In Situ Studies for Particle System Synthesis and Early Event Dynamics in Bio-Environments," oral presentation, Empa PhD Seminar, St. Gallen, Switzerland (Jan 2018).
8. **Anjani K. Maurya**, Amin Sadeghpour, René M. Rossi, Alex Dommann, Antonia Neels; "Structure–Morphology Correlation Studies in Electrospun Nanofibers by SAXS and WAXS," oral presentation, Empa PhD Symposium 2017, Dübendorf, Switzerland (Nov 2017).
7. **Anjani K. Maurya**, Amin Sadeghpour, René M. Rossi, Alex Dommann, Antonia Neels; "Structural Analysis of Electrospun Fiber Membranes by SAXS and WAXS," oral presentation, Swiss Crystallography Meeting 2017, Geneva, Switzerland (Sep 2017).
6. **Anjani K. Maurya**, Nitin Saxena, Peter Müller-Buschbaum; "In-Plane and Cross-Plane Seebeck Coefficients in Organic Thermoelectric Thin Films," poster presentation, 6th Energy Colloquium, Munich School of Engineering, TUM, Munich, Germany (Jul 2016).
5. **Anjani K. Maurya**, Nitin Saxena, Peter Müller-Buschbaum; "Enhancement of the Seebeck Coefficient by Dedoping of Conducting Polymers," poster presentation, Summer School, Austria (Jun 2016).
4. **Anjani K. Maurya**, Nitin Saxena, Peter Müller-Buschbaum; "Hybrid-Based Thermoelectrics," oral presentation, MaMaSELF Status Meeting, Rigi Kulm, Switzerland (May 2016).
3. **Anjani K. Maurya**, Nitin Saxena, Peter Müller-Buschbaum; "Hybrid-Based Thermoelectrics," poster presentation, DPG Spring Meeting 2016, Regensburg, Germany (Mar 2016).
2. **Anjani K. Maurya**; "Band Gap Variation in Bilayer Graphene and Silicene under a Transverse Electric Field," poster presentation, International Conference on Advanced Nanomaterials and Nanotechnology (ICANN-2013), IIT Guwahati, Guwahati, India (Dec 2013).
1. Lalhriatzuala, **Anjani K. Maurya**, Pratima Agarwal; "Structural and Transport Studies of ZnS Thin Films Prepared by the Doctor Blade Technique," poster presentation, Condensed Matter Days 2011, Gauhati University, Guwahati, India (Aug 2011).