

**2025 NSLS-II/CFN Users' Meeting
Poster Session**

List of Posters

Poster Number	Title	Presenter Last Name	Presenter First Name	Institution
1	Trace Elements Effects on the Blue Stimulated Luminescence Signal Components in Quartz	Castle	Victoria	Stony Brook University
2	Infrared-radiofluorescence and μ -XRF imaging of K-rich feldspars: Toward extending the upper age limit of luminescence dating	Grandfield	Taylor	Stony Brook University
3	Development of a High-Precision Electrometer at NSLS-II	Ha	Kiman	Brookhaven National Laboratory
4	SXN: The upcoming Soft X-ray Nanoprobe at NSLS-II	Hu	Wen	Brookhaven National Laboratory
5	R&D on Maximizing Electron Orbit and X-ray Beam Stabilities	Kongtawong	Sukho	Brookhaven National Laboratory
6	Collaborative Human-Agentic Control of Autonomous Experiments with Bluesky	Maffettone	Phillip	Brookhaven National Laboratory
7	CAPS: A modular crystal analyzer system for x-ray powder diffraction	Siddons	David	Brookhaven National Laboratory
8	Advancing X-ray Microscopy instrumentation for Nano-Imaging	Xu	Weihe	Brookhaven National Laboratory
9	Protein Dynamics and Kinetic Studies - Room Temperature and Time Resolved Serial Crystallography	Fuchs	Martin	Brookhaven National Laboratory
10	Benchtop X-ray fluorescence Imaging with the Sigray Attomap-310 for Biological Applications	McCarthy	Liam	Brookhaven National Laboratory
11	Spatial heterogeneity of reaction mechanism of electrodeposited ϵ -MnO ₂ Cathodes for Aqueous Zn-Ion Batteries Using Synchrotron X-ray Imaging	Adeniyi	Adesanmi	Stony Brook University
12	Geo-Responsive Chemomechanics in Novel Cementitious Materials for Enhanced Geothermal Systems	Bai	Jianming	Brookhaven National Laboratory
13	Suppressing Niobium Oxidation with Platinum Encapsulation for Qubit-Grade Superconducting Films	Chattaraj	Ananya	Brookhaven National Laboratory
14	Discovery and Recovery of Novel Synthetic Carbides Using Multi-Anvil Press Synthesis	Cote	Elizabeth	University of Massachusetts @ Amherst

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15	Revealing the Dynamics and Kinetics of Copper Pulse Reversal Electrodeposition with Multimodal Synchrotron X-ray Nanoimaging	Gan	Yichen	Stony Brook University
16	Investigating the Reaction Mechanism of Electrodeposited ϵ -MnO ₂ Cathodes for Aqueous Zn-Ion Batteries Using Synchrotron X-ray Multimodal Analysis	Kankanallu	Varun	Stony Brook University
17	Application of Machine Learning Techniques to Analyze Electron Microscope Data	Lee	Brian	Brookhaven National Laboratory
18	Spontaneous Formation of Single-Crystalline Spherulites in a Chiral 2D Hybrid Perovskite	Li	Shunran	Yale University
19	Unveiling the Dynamic Evolution of the Solid Electrolyte Interphase: Multimodal Insights into Sodium Metal Deposition and Stripping	Lo	Chang-An	Stony Brook University
20	2D Layer Protected Gallium Arsenide Photocathode for Electron Source Applications: Intercalation Study of Cs	Mondal	Kali	Brookhaven National Laboratory
21	Oxide film on multi-phase complex concentrated alloys: Nanoscale spectroscopic imaging with XPEEM and TOF-SIMS	Orson	Keithen	University of Virginia
22	Unraveling Correlation Between Residual Stress and Pitting Corrosion Behavior in Laser Powder Bed Fusion 316L Stainless Steel	Ouyang	Mingxi	Stony Brook University
23	Morphologically Distinct Cu ₃ (HHTP) ₂ Nanowire Coatings on Fibrous Textiles via Atomic Layer Deposition (ALD)-Driven Processing	Perumala Venkata	Hanukrutha	Stony Brook University
24	Stabilizing Oxygen Redox Cathodes in Na-ion Batteries	Ronne	Arthur	Stony Brook University
25	Carboxylated nanocellulose hydrogels by sustainable nitro-oxidation of sugarcane pulp for Cr(VI) adsorption	Silva Gomes	Andressa	Stony Brook University
26	Dynamics of Polymer-Mediated Nanoparticle Network in Polystyrene-Grafted Silica Nanoparticle Melts	Tsapatsaris	Leonidas	Stony Brook University
27	Operando Synchrotron Studies of Li-S Pouch Cell Batteries	Wang	Yulong	Stony Brook University
28	In situ X-ray spectroscopy studies of square-planar Fe species under NH ₃ SCR conditions	Wierzbicki	Dominik	Brookhaven National Laboratory
29	In Situ X-ray Scattering Experiments For Polymer Structure Evolution During Processing	Wu	Siyu	Brookhaven National Laboratory

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30	Revealing the Role of Oxygen Species of Transition Metal Oxide-Coated BiVO ₄ for Photoelectrochemical Water Splitting	Xi	Zhaoyi	Brookhaven National Laboratory
31	Hard X-ray Nanoprobe: Toward Smart, Fast, and Multimodal Tomography	Yan	Hanfei	Brookhaven National Laboratory
32	Microstructural Evolution in 316L stainless steel under lead-bismuth eutectic corrosion	Zhang	Zhiyu	The Pennsylvania State University
33	Application of Synchrotron X-ray Topography on 4H-SiC Crystal at HEX Beamline	Zhang	Kaixuan	Stony Brook University
34	Enhancing Nanoscale XRF-XANES Imaging with Ptychography and Deep Learning for High-Resolution Chemical and Morphological Analysis	Zheng	Xiaoyin	Stony Brook University
35	Autonomous Exploration of Nanostructure Evolution in Solid-State Metal Dealloying via Multimodal Synchrotron X-ray and Laser-Induced Thermal Gradients	Zincone	Carly	Stony Brook University
36	Electrochemical Reduction Pathways from Goethite to Green Iron in Alkaline Solution with Silicate Additive	Arumugam	Divakar	Worcester Polytechnic Institute
37	Enhanced Urea Oxidation Electrocatalytic Activity by Synergistic Cobalt and Nickel Mixed Oxides	Zhou	Tongxin	Worcester Polytechnic Institute
38	Eco-friendly Synthesis of Cellulose Hydrogels using Nitro-Oxidation Process Effluent as a Green Crosslinker	Abdelaziz	Yasmeen	Stony Brook University
39	Simulation of Coherent X-ray Scattering Experiments at Modern Light Sources: XPCS and Ptychography	Goel	Himanshu	Brookhaven National Laboratory
40	Tiled: A Data Access Service for Data Science Tools and Portals	Karakuzu	Seher	Brookhaven National Laboratory
41	Carboxylated cellulose nanofibers produced by pressure-assisted nitro oxidation process of wood chips for the removal of lead and cadmium from water	Mhaskar	Sanket	Stony Brook University
42	R&D on the NSLS-II Facility Upgrade	Smaluk	Victor	Brookhaven National Laboratory

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43	Characterizing Nano-ceria Crystallites by XRD follow-up with Pair Distribution Function Analysis	Chan	Siu-Wai	Columbia University
44	'Impact of EuCl ₃ Additive on the Morphological Evolution of Ni-20Cr Alloys in LiCl-KCl Eutectic Molten Salt Environments'	Mohanty	Ankita	Stony Brook University
45	X-ray Powder Diffraction Analysis of Soil Minerals Dolomite, Garnet and Plagioclase Feldspar	Aziz	Badreddine	West Islip High School
46	Analyzing Different Sediments to Create a Mineral Library	Bharat	Jared	West Islip High School
47	The Effect of Proximity of a Salt Marsh to Urbanized Areas on the Presence of Heavy Metals	Bonetti	Gregorio	Bethpage High School
48	Dendrological investigation and an Elemental Analysis Using Root Cross Sections and Adjacent Soil	Carter	Julia	Newfield High School
49	Abundance of Cellophane and PET Microplastics in Sediments Across Long Island	Crosley	Evamaria	West Islip High School
50	Microplastics in Sporobolus alterniflorus at Smith Point Beach	Grausso	Benjamin	Eastport South Manor Junior Senior High School
51	Utilizing Lichens as Bioindicators of Microplastic Pollution in the Air	Minetti	Anna	Shoreham Wading River High School
52	Addressing Road Runoff as a Vector of Microplastic and Heavy Metal Contamination in Local Waterways	Okurowski	Aidan	West Islip High School
53	X-Ray Powder Diffraction Analysis of Soil Minerals Apatite, Biotite, and Mica	Olfano	Jillian	West Islip High School
54	Microplastics in Sporobolus alterniflorus at Indian Island Beach	Stimpson	Brooke	Eastport South Manor Junior Senior High School
55	Ballistic Barrage Against Beta Lactamases: Novel APO Structure of the Class B2 Beta Lactamase from Burkholderia multivorans	Ackley	Jameson	Eastport South Manor Junior-Senior High School

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56	Biomolecular Dynamics of Perfluoroalkyl Pollutants in Complex with Bovine Serum Albumin	Decapua	Gabrielle	Connetquot High School
57	Analyzing <i>C. elegans</i> as a Cancer Model Using Infrared Microspectroscopy	Deegan	Ryan	West Islip High School
58	Research on the Dihydroorotase Homodimeric type for potential future inhibitors	Emran	Sharika	Longwood Senior High School
59	Combating Antibiotic Resistance with Structural Biology: Striking Out the Enzyme Beta-Lactamase	Holub	Alexsandra	Eastport South Manor Jr/Sr High School
60	Interactions Between Spider Plants and Volatile Organic Compounds (VOCs)	Lam	Abigail	West Islip High School
61	A Comparison of Microplastic Amount and Type Between Exotic and Common Bird Meats.	Lee	Spencer	Shoreham Wading-River High School
62	Getting Back at AcbaC: Stopping Resistance with the Attack on Dihydroorotase	Marx	Olivia	Eastport South Manor Jr/Sr High School
63	Analyzing Microplastic Quantity and Chemical Composition in Farm-Raised vs Wild-Caught Shrimp for Human Consumption Using Infrared Spectroscopy	Miranda	Emilia	West Islip High School
64	Analyzing the Structure of Dihydroorotase	Mitchell	Catherine	Longwood High School
65	The analysis of microplastics in exotic mammals and their common counterparts.	Nigrel	Timothy	Shoreham Wading River High school
66	A characterization of the different types of microplastics and their associated heavy metals in tissue from <i>Ilyanassa obsoleta</i> in a Long Island Salt Marsh	O'Neill	Julianna	Shoreham-Wading River High School
67	Evaluating Herbal Supplements through Mineral Content and DNA Analysis	Podolska	Emily	West Islip High School
68	The Potential for Metal Toxicity in Clay Masks	Seletskaya	Alexandra	Shoreham Wading River High School

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69	Investigating the Resource Battle Between Eastern White Pine and the Invasive Species Glossy Buckthorn	Sharma	Umber	Newfield High School
70	Determining the Structure of Methylmalonate Semialdehyde Dehydrogenase Isolated from Burkholderia Cenocepacia	Zink	Jadyn	Islip High School
71	The effects of different environmental conditions on the chemical degradation of Lithium-Ion batteries	Tishchenko	Alexander	Shoreham-Wading River High School