

Poster Session 1 (MXene Symposium)
(Sept. 8, 2025, Monday, 5:00 P.M.)

ID	No	Abstract Title	Authors
1372		Cobalt-Functionalized MXene (Ti3C2Tx): A Novel Material for Superior EMI Shielding	PRIYAM SRIVASTAVA, RANI ROHINI
1447		In-Vitro Anti-Cancer Evaluation of 2D-Ti3C2 MXene-Coated Hesperetin (Ti3C2_H): Insights into Toxicity, Cell Cycle Arrest, and Induction of Cell Death	VISHAL KUMAR DEB, Utkarsh Jain
1449		Optimizing Iron-Impregnated Mo2C MXene for Electrocatalytic Nitrogen Reduction	Sabine Éliane Midré, Liang Tian, Sara Goberna Ferron, Hermenegildo Garcia, Ana Primo
1450		Exploring the Effect of Surface Terminal Groups (T = Cl, Br, NH) on the Oxygen Reduction Reaction Selectivity (2e- or 4e-) of Ti3C2Tx MXene Functionalized with Fe Single-Atoms	Dawid Kruger, Juan José Delgado Jaen, F Javier Recio Cortes, Sara Goberna Ferron, Ana Primo, Hermenegildo Garcia
1463		Multi-Functional Integration of Few-Layer Ti3C2Tx MXene for Low-Power Electronic and Optoelectronic Devices	Ankita Rawat, Pawan kumar Kulriya
1475		Ultrasensitive Non-Enzymatic Electrochemical Detection of Paraoxon-Ethyl In Fruit Samples Using a 2D Ti3C2Tx/MWCNT-OH	Munawar Khalil
1479		Synthesis-Controlled Engineering of Surface Terminations in Ti2CTx MXenes via Chemical Etching and Molten Salt Shielded Methods	Nima Amousa, Louis Godeffroy, Mailis Lounasvuori, Andreas Furchner, Tristan Petit
1491		Optimizing MXene Coatings on Electrospun Nanofibers	Marina Sapauskiene, Veronika Zahorodna, Oleksiy Gogotsi, Almira Ramanaviciene, Anton Popov
1540		Engineering MXene Surfaces for CO2 Capture: The Electronic Impact of Vanadium Doping	Azita Etminan, Peyman Karimi, Peter Holliman, Majid Majd, Ciaran Martin, Mary Larimi, Ian Mabbett
1548		Synthesis and NMR Study of Local Atomic Symmetry of Ti3SiC2 MAX Phase	Inna Kirian, Yuriy Zagorodniy, Vladimir Trachevski, Mykola Skoryk, Andrey Lakhnik, Alexander Rud
1562		Mxene-Based 2D Materials for Energy Storage Applications	Ali Aseer Riza
1573		Rapid and Selective Detection of Paracetamol by Gold-Functionalized MXene	Saqib Ali, Oleksiy Gogotsi, Arūnas Ramanavičius, Simonas Ramanavičius
1576		In Situ Growth of NaNbO3 from Nb2C MXene Enables Efficient Aerobic Oxime Oxidation in 3D Porous Carbon Catalysts	Elena Romero Salicio, Aicha Anouar, Ana Primo, Hermenegildo Garcia
1601		Development Superconductive Mo2TiC2Tx MXene/Laser-Induced Graphene Hybrid Electrodes for Next-Generation Supercapacitor Applications	Samaneh Shahsavarifar, Robert Bogdanowicz
1607		Nickel Nanoparticles Decorated Nb4C3Tx MXene for Enhanced Electrochemical Sensing of Bioactive Compounds	Andrej Vikartovský, Lenka Lorencová, L'ubomír Orovčík, Monika Jerigová, Peter Kasák, Ján Tkáč
1613		Mechanism and Dependences of MXene-Based Electrochemical Detection of Cadmium Ions	Ilya Navitski, Šarūnas Žukauskas, Ernestas Svirbutavičius, Alma Ručinskienė, Simonas Ramanavičius, Anton Popov, Almira Ramanaviciene, Yury Gogotsi, Arunas Ramanavicius

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1615		Efficiency of Janus MXenes in CO ₂ Reduction by Photocatalytic Water Splittin	Subhradip Ghosh, Swati Shaw
1619		Recent Advances Towards Chemical Vapor Deposition Synthesis of Large-Scale MXenes	Azra Khan, Xinming Xing, Rem Elnahas, Mauro Ramos Jimenez, Jimmy Faria Albanese, Miguel Muñoz Rojo
1621		Ti ₃ C ₂ Tx MXene and Biosensors: Is It a Match?	Lenka Lorencová, Andrej Vikartovský, Peter Kasák, Ján Tkáč
1630		MXene Boosted Novel Zr-Coordination Polymer as Highly Efficient Photocatalyst for Hydrogen Evolution	Burcu TOPALOĞLU AKSOY, Bünyemin ÇOŞUT
1632		Design of the Ti ₃ C ₂ MXene Loaded P/N rich hexatopic Nanorod Heterostructures	Bünyemin ÇOŞUT, Burcu TOPALOĞLU AKSOY
1634		Thermal Transport in Two-Dimensional MXenes Films	Mauro Ramos Jimenez, Wenkang Chen, Katja Klinar, Jorge Rodríguez Moreno, Eduardo Ruiz-Hitzky, Elena Navarrete Astorga, Javier Perez Carvajal, Miguel Muñoz Rojo
1637		Selective No Gas Sensing in O-Functionalized TiVC MXenes: Computational Insights	Archana Singh Kharb, Kamal Kumar, Amit Chawla Kumar, Abhishek Mishra Kumar
1660		The Antimicrobial Potential of MXenes: Surface Attachment Without Cell Disruption	Yevheniia Husak, Igor Iatsunskyi, Veronika Zahorodna, Oleksiy Gogotsi, Viktoriia Korniienko, Maksym Pogorielov
1673		Unified Catalytic Performance of Assimilated Bimetallic Sulphide onto Niobium Carbide MXene for Overall Water Splitting	Vartika Sharma, Vaibhav Kulshrestha
1678		Surface Oxygen Enrichment Of Chlorine-Terminated Ti ₃ C ₂ Tx MXene Towards Enhanced Solvent Dispersibility	Kevinilo Perez Marquez, Mia Angela Nuñez Judicpa, Rufus Ceasar Mart Ramos, Behnam Akhavan, Elmer Austria, Jizhen Zhang, Luke Henderson, Ken Aldren Sumaya Usman, Joselito Razal
1679		Flexible MXene–POP Hybrid Gels Enabled by Noncovalent Assembly for Micro-Supercapacitor Applications	Mutawara Mahmood Baig, Yizhou Zhang, Huan Pang
1683		Ti ₃ C ₂ Tx MXene-Activated Carbon Based Asymmetric Supercapacitor Device with High Active Mass Loading	Varsha Vijayan, Shalu Mariam George, Asha A S
1691		Plasma-Assisted Surface Modification of Ti ₂ C MXene For High-Performance Supercapacitors	Laura Martinčič, Anjana Baby, Neelakandan Marath Santhosh, Uroš Cvelbar, Aleksander Zidanšek
1699		Iodine-Doped WSe ₂ /MXene Hybrid Inks for High-Performance Inkjet-Printed Microsupercapacitors	Pegah Bavafa, Pegah Bavafa, Aytekin Uzunoglu
1705		Enhanced Detection of Gut Biomarker Trimethyl Amine Oxide Using a Nb ₂ CTx MXene Based Molecular Imprinted Sensor with Integrated Methylene Blue Redox Probe	Ankitha Menon, P Abdul Rasheed
1714		Enhanced Neuromorphic Performance with Control etched Ti ₃ C ₂ Tx MXene-based Low-Voltage Operating Flexible Memristors for Wearable Healthcare Electronics	Jeny D Gosai, Ankur Solanki, Nitin Chaudhari
1722		Z-Scheme Ti ₃ C ₂ MXene@CeO ₂ Heterostructures for Efficient and Secondary Pollution Free Photodegradation of Pharmaceutical Drug	Madiha Khan

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1731		Promising Solution for Electromagnetic Interference Shielding Using Novel Ta ₂ C MXene-Based Nanocomposites	Madiha Liaquat, Aqsa Arshad
1738		HF-Free Synthesis of Mo-Based Bi-Metallic MXenes for High-Performance Printable Electronics and Flexible Supercapacitors	Afsheen Zahra Syedah, Aamir Iqbal, Rene Schneider, Jakob Heier, Frank A Nüesch
1739		ROS-Mediated Antibacterial Effects of Oxidized Ti ₃ C ₂ MXenes on Escherichia Coli and Staphylococcus Aureus	Pavlo Shubin, Volodymyr Deineka, Baiba Zandersone, Ivan Baginskyi, Serhii Dukhnovskiy, Veronika Zahorodna, Oleksiy Gogotsi, Viktoriia Korniienko
1743		In Vitro and In Vivo Evaluation of MXene-Driven Photothermal Therapy of Purulent Wound Treatment	Yuliia Varava, Andrii Liutyi, Artem Shmatkov, Yevhen Samokhin, Vyacheslav Kukurika, Iryna Bulyha, Oleksandr Solodovnyk, Viktoriia Korniienko, Oleksiy Gogotsi, Veronika Zahorodna
1747		Ti ₃ C ₂ Tx/ZN-BTC a MXene-MOF Hybrid Nanostructure for Ultra-Sensitive NO ₂ Detection	Dhananjaya Panda, Koteswara Peta Rao
1757		Systemic Distribution and Organ Impact of Intravenously Injected MXenes	Milena Yalyzhko, Ihor Panko, Tetiana Mehed, Ivan Baginskyi, Serhii Dukhnovskiy, Olga Nosko, Veronika Zahorodna, Sergiy Kyrlyenko, Oksana Sulaieva, Oleksiy Gogotsi, Maksym Pogorielov
1770		Enhanced Oxygen Evolution Performance of Ti ₃ C ₂ T _x MXene Decorated with MoS ₂ Nanoparticles: A Synergistic Nanocomposite Approach	Mahesh Margoni Mudaliar, Ali Akbari-Fakhrabadi
1771		Bottom-Up Synthesis of MAX/MXene Thin Films via Magnetron Sputtering for Gas Sensing Applications	Amit Kumar Gangwar, Rodrigo Espinoza-González
1774		In Search of Fluorescent Probes With Specificity to MXenes	Inna Chorna, Anton Roshchupkin, Artem Shmatkov, Oleksandr Kazakov-Kravchenko, Ivan Baginskyi, Serhii Dukhnovskiy, Iryna Roslyk, Veronika Zahorodna, Oleksiy Gogotsi, Maksym Pogorielov, Sergiy Yarmoluk, Sergiy Kyrlyenko
1778		PCL-MXene Biocompatibility: Effect of Fiber Orientation and MXene Integration	Elza Gārša, Aleksandra Zawadzka, Pavlo Shubin, Ivan Baginsky, Yevheniia Husak, Veronika Zahorodna, Oleksiy Gogotsi, Kateryna Diedkova
1779		High Capture Capacity of CO ₂ in a Nickel- Ti ₃ C ₂ Tx MXene-Flurohectorite Clay Heterostructure	Barbara Pacakova, Anupma Thakur, Nithin Balachandran, Nicolas Heymans, Hanna Demchenko, Alexander Harold Saxton, Guy De Weireld, Josef Breu, Babak Anasori, Jon Otto Fossum
1781		Role of MXene Chemistry and Morphology on Cell Immune Response	Marks Truhins, Kateryna Diedkova, Iryna Roslyk, Agata Blacha-Grzechnik, Igor Iatsunskyi, Volodymyr Deineka, Pavlo Shubin, Mārtiņš Boroduškis, Oksana Sulaieva, Ilya Yanko, Veronika Zahorodna, Oleksiy Gogotsi, Maksym Pogorielov

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1805		Gradient-Structured Nanocomposites Based on MXene@Ni-MNP-Coated PVDF-TrFE Nanofibers for Absorption-Dominated EMI Shielding	Arturo Barjola, Oscar Sahuquillo, Anupma Thakur, Nithin Balachandran, Babak Anasori, Enrique Gimenez
1810		MXene-Assisted Near-Infrared Laser Photothermal Therapy of Melanoma in Vivo	Anton Roshchupkin, Inna Chorna, Zhanna Klishchova, Ilya Yanko, Milena Yalyzhko, Ivan Baginskyi, Veronika Zahorodna, Júlio Sílvio de Sousa Bueno Filho, Gulnaz Gahramanova, Ihor Panko, Oksana Sulaieva, Chacon Benjamin, Laura Fusco, Lucia Gemma Delogu, Oleksandr Solodovnyk, Oleksiy Gogotsi, Sergiy Kyrylenko, Maksym Pogorielov
1827		Machine Learning Accelerated High-Throughput Study of M4X3TX MXenes	Sakshi Goel, Arti Kashyap
1880		Real-Time Monitoring of Bacterial Growth Kinetics and Evaluation of Antibacterial Activity of MXenes	Olena Haidamak, Yuliia Varava, Ivan Baginskyi, Veronika Zahorodna, Andrii Kubytskyi, Svitlana Moroz, Oleksiy Gogotsi, Oksana Sulaieva, Viktoriia Korniienko
1892		High-Permittivity Solvents Increase MXene Stability and Stacking Order Enabling Ultraefficient Terahertz Shielding	Xiaodan Hong, Zhongpeng Lyu(Lv)
1901		On-skin Paintable and Stable MXene Hydrogels for Electrocardiogram Monitoring With High Signal-to-Noise Ratio	Aamir Iqbal, Afsheen Zahra Syedah, Shanyu Zhao
1902		Boosting Li-S Battery Performance: 3D Electrospun PVDF/MXene-TMO Hybrid Interlayers with Hot-Press-Enhanced Polysulfide Confinement	Busra Cetiner, Shungui Deng, Jakob Heier, Begum Yazar Kaplan, Selmiye Alkan Gursel, Alp Yurum
1906		The Selection of Biomarkers for the Determination of Lung Cancer	Agne Rmanavičiūtė, Greta Žvirzdinė, Adomas Žvirzdinas, Arūnas Ramanavičius