

CPM-9

Monday, May 20, 2024

Poster Session: Poster Session with Refreshments (4:30 PM - 7:30 PM)

| [id] title | presenter | board |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------|
| [128] Sustainable and Shaped Synthesis of MOF Composites Using PET Waste for Efficient Phosphate Removal | BOUKAYOUHT, KHAIR EDDIN | |
| [66] Sustainable Synthesis of adaptable MOFs Using PET Waste for Efficient Phosphate Removal | MOUMEN, EL MEHDI | |
| [53] Mechanical Stress due to Adsorption of Benzene in Carbon Pore Towards an Understanding of Atmospheric Soot | IVANOVA, Ella | |
| [63] Analysis protocol for quantitative structure-property understanding of adsorptive separation. | PAEK, Changyub | |
| [81] Evaluation of cellulosic fiber pore structure with thermoporosimetry | MALONEY, Thad | |
| [91] Revisit the Molecular Sieving Mechanism in LTA Zeolites: Does Size Really Matter? | Dr SUN, Mingzhe | |
| [4] Temperature-Dependent V-Type Isotherm Models: Applied to Water Vapor Adsorption on Metal-Organic Frameworks | CARDENAS, Cristian | 1 |
| [19] Facile Characterization of Pore Accessibility in Metal-Organic Framework/Polymer Composites | TOVAR, Trenton | 2 |
| [21] Characterization of hydroxyl groups in zeolite defects using advanced temperature-programmed desorption | SHIMIZU, Shunsuke | 3 |
| [42] High sensitivity analysis of nitrogen in carbon materials using temperature-programmed desorption up to 2100 °C | Dr YOSHII, Takeharu | 4 |
| [130] Explorations of the Molecules-to-Materials Continuum | SZILAGYI, Robert | 5 |
| [28] Characterization of Mycelium-Based Leather Using Sorption-Ultrasonic Experiments | NABIYEVA, Gunel | 6 |
| [32] Validation of pore size distribution from a new GCMC kernel based on a slit-pore model with carbon surface heterogeneity | NAKAI, Kazuyuki | 7 |
| [40] Kinetics of Adsorption-Induced Deformation in Microporous Materials | KOLESNIKOV, Andrei | 8 |
| [45] Sorption-Ultrasonic Characterization of Water-Filled Xerogels | KARUNARATHNE, Ashoka | 9 |
| [74] Assessment of the Specific Surface Area by Small-Angle X-ray Scattering | KEILBACH, Andreas | 10 |
| [97] Extruding diffusion constants from your extrudates: PFG-NMR and chromatography | BURNETT, Daniel | 11 |
| [103] Impact of Crystal Structure on Methanol Vapor Adsorption in MFI-Type Zeolites: Equilibrium Isotherms and Kinetic Insights | Prof. SILVESTRE-ALBERO, Joaquín | 12 |
| [117] Quantification of Copolymer Microstructure from Liquid Chromatography using a Statistical Interaction Model | RASMUSSEN, Christopher | 13 |
| [118] Estimation of porous media transport properties solely based on mercury intrusion porosimetry | Prof. GRÉGOIRE, David | 14 |
| [124] The influence of confinement effects on the thermophysical properties of 4-methoxyazobenzene | KRAUS, Timm | 15 |

| | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|
| [108] PyCOSMOS: A Python Tool for Compartmentalization of Unit Cells of Metal-Organic Frameworks | PARASHAR, Shivam | 16 |
| [110] Modelling Kerogen Flexibility in Response to Hydrocarbon Adsorption using Hybrid Molecular Dynamics/Monte Carlo | PARASHAR, Shivam | 17 |
| [113] Characterization of Nanoporous Carbons Using Generative Models | Mr SANTOS, Lucas J. | 18 |
| [25] A Novel Method for Obtaining Carbon Molecular Sieves for N₂/O₂ Separation | URITA, Koki | 19 |
| [34] INFRAAsorp & MULTIPort Rapid surface analysis by optical calorimetry | Prof. KASKEL, Stefan | 20 |
| [36] Unique dissolution/precipitation phenomena in microspace induced by physisorption | YOKOYAMA, Takeru | 21 |
| [39] Reference Isotherms for Water Vapor Sorption on Nanoporous Carbon: Results of an Interlaboratory Study | NGUYEN, Huong Giang | 22 |
| [41] Small-angle neutron scattering reveals high-density adsorbed hydrogen in carbon micropores at low pressures and supercritical temperature | STOCK, Sebastian | 23 |
| [48] Scalable Continuous Flow Hydrogenation Using Structured Catalyst Reactor | NIKOLAKIS, Vladimiro | 24 |
| [72] Solid-State Hydrogen Storage: Advancements in Nanoporous Materials and Neutron Scattering Techniques | TIAN, Mi | 25 |
| [78] Microscopic understanding of stability and adsorption/separation of CO₂ from flue gas by MOFs in real industrial conditions | DEVAUTOUR-VINOT, Sabine | 26 |
| [84] Understanding wetting and drying of nanoporous media through optical and dilatometry experiments | SANCHEZ, Juan | 27 |
| [85] CH₄/H₂O Competitive adsorption in Nano porous materials under clathrate hydrate formation conditions | PANDEY, JYOTI SHANKER | 28 |
| [95] Acoustic Response of Fluid Adsorption in Nanoporous Materials | DIDIER, Loriane | 29 |
| [100] Supercritical fluid activation and in-situ adsorption-microcalorimetric system to directly measure the gas adsorption amount, heat and kinetic data | JIANG, Wentao | 30 |
| [104] Evaluation of a Commercial Chabazite-Type Zeolite Aging in the Industrial Process of Dehydration of Natural Gas CO₂-Enriched | Dr BARRETO, Amaro G. | 31 |
| [127] Reference Isotherms using Reference Materials | VAN ZEE, Roger | 32 |
| [143] Converting Waste Tire to Activated Carbon Adsorbent Materials for Landfill Gas Purification | Mr NUTTER, Brandyn | 33 |
| [147] Improving the robustness and reproducibility of gas adsorption isotherm measurements on nanoporous materials | BROOM, Darren | 34 |
| [10] Densification and Validation of Binderless MOF Monoliths Based On Temperature-Pressure Swing Hydrogen Storage and Delivery Conditions | Ms MURUGAVEL, Ruthradharshini | 35 |
| [30] Self-template Synthesis of Nanoporous Carbons from π-conjugated Ionic Liquids with Molecular Nanocarbon Functionalities | FUTAMURA, Ryusuke | 36 |
| [33] Investigating the effect of the extra-framework cation on propane / propylene adsorption in LTA zeolites | BENJAMIN, Claessens | 37 |
| [43] Carbon Dioxide Capture in NaOH-Impregnated Activated Carbon | WONGKOBLAP, Atichat | 38 |
| [46] Metal Organic Framework Hollow Fibers for CO₂ adsorption and Chemical Warfare Agent Degradation | LANDERS, John | 39 |
| [59] Hydrophobic metal-organic frameworks with new fluorinated ligands | Prof. ZELEŇÁK, Vladimír | 40 |

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----|
| [64] Development of novel porous geopolymer monoliths based on Moroccan oil shale for effective removal of heavy metals (Zn (II), Cu (II), Pb (II)) from wastewater. | MANSOURI, said | 41 |
| [69] Sorption of SF6 and SO2 on Modified Zeolites Materials | ZARĘBSKA, Katarzyna | 42 |
| [71] Trapped in the CO2 Loop: A Study of Carbon/MOF Composites for Direct Air Capture (DAC) | ZARĘBSKA, Katarzyna | 43 |
| [75] Applications of MOFs for the chemical warfare agents (CWAs) simulant adsorption | BLOCH, Emily | 44 |
| [83] 3D-printed hybrid zeolite structures constructed by a phase inversion process | Dr DE VOS, Yoran | 45 |
| [90] Novel nanoporous composites for hydrogen storage | MIQUEU, Christelle | 46 |
| [92] In situ pXRD monitoring of compliant MOFs under combined mechanical and gas pressure | Dr BURNETT, Daniel | 47 |
| [96] Impact of Carbon Content in Single-Wall Carbon Nanotube-Titanium Dioxide Composites Interfacial Modulation and Catalytic Behavior | Prof. SILVESTRE-ALBERO, Joaquín | 48 |
| [107] Tailoring the Adsorption Properties of Hierarchical Porous Silicas for High-Capacity Water Sorbents | Prof. WALTON, Krista Dr FULVIO, Pasquale | 49 |
| [114] Quantifying Structural Rigidity in Metal–Organic Frameworks with Increased Linker Dimensionality | SMOLJAN, Courtney | 50 |
| [141] Carbon Dioxide Capture from Flue Gas using 13X binder free Zeolite: effect of the presence of Sulfur Dioxide | CAVALCANTE, Celio | 51 |
| [142] A Comparative Study of Physical and Chemical Modification for Improved CO2 Capture in Fixed-Bed Adsorption | NAKSUSUK, Suravit | 52 |
| [144] Analyzing the Performance of Propylamine-Grafted Mesoporous Silica for Direct Air Capture Applications | AHMADIAN HOSSEINI, Amirjavad | 53 |
| [145] Triamine-Grafted Mesoporous Silica Materials for CO2 Capture from the Atmosphere | ROJAS, Laura | 54 |
| [2] Molecular mechanisms of water intrusion and extrusion in hydrophobic nanopores | Mr ABDELLA, Abdelraheem | 55 |
| [9] Molecular simulation of separation of C60 and coronene in silica nanopores | Mr DURDYEV, Rustam | 56 |
| [13] Composite Boron Nitride-based Immobilized Nanohydride Toward Self-Accelerated Reversible Hydrogen Storage | TSIPOAKA, Maxwell | 57 |
| [20] The Effect of Carbon Nanotube Diameter on Hydration of Critical Material Ions from E-waste | BAKER, Zachary | 58 |
| [26] In-Silico Analysis of the Mechanical Properties of Fluid-Saturated Zeolites | Mr FLORES ROMAN, Santiago | 59 |
| [27] Molecular Simulation of Adsorption of Sarin and Simulants on Metal–Organic Frameworks | BASHAROVA, Elizaveta | 60 |
| [44] A unified approach for bridging the gap between cDFT and equation of state for confined fluids | Prof. GOMES BARRETO JR., Amaro | 61 |
| [55] Hydrogen storage: predicting at room temperature in a series of activated carbons | Dr GONÇALVES, Daniel V. | 62 |
| [80] Study of Crystallization Pressure by Molecular Simulation | MAHMOUD HAWCHAR, Bilal | 63 |
| [89] Incorporating material flexibility effects into adsorption modeling using non-local Density Functional Theory | MIQUEU, Christelle | 64 |
| [111] Modeling Adsorption of Simple Fluids and Alkanes on 3D Nanoporous Carbons | CORRENTE, Nicholas | 65 |

| | | |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------|----|
| [112] SAFT-DFT Studies of Nanoporous Carbon Deformation Induced by Multicomponent Adsorption | CORRENTE, Nicholas | 66 |
| [146] Development and application of an advanced percolation model for pore network characterization by physical adsorption | SÖLLNER, Jakob | 67 |