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Professional Appointments

W. M. Keck Professor of Energy, Massachusetts Institute of Technology	July 2020 – present
Professor of Chemistry, Massachusetts Institute of Technology	July 2020 – present
Associate Editor, <i>Chemical Science</i> (Royal Society of Chemistry)	October 2017 – present
Associate Professor of Chemistry, Massachusetts Institute of Technology	July 2015 – June 2020
Assistant Professor of Chemistry, Massachusetts Institute of Technology	July 2010 – June 2015
Postdoctoral Associate, MIT (Advisor: Daniel G. Nocera)	August 2008 – July 2010

Education

Ph.D. in Inorganic Chemistry (Advisor: Jeffrey R. Long)	University of California, Berkeley, May 2008
<i>Thesis Title:</i> Hydrogen Storage in Microporous Metal-Organic Frameworks with Exposed Metal Sites	
B.A. <i>magna cum laude</i> in Chemistry (Advisor: Jeffrey Schwartz)	Princeton University, June 2003

Awards and Honors

Thomson-Reuters/Clarivate Analytics Highly Cited Chemists List	yearly 2014-2023
Brown Foundation Investigator Award	2023
Gislason Lecturer, University of Illinois, Chicago	2023
Fellow, American Association for the Advancement of Science	2022
Lagow Lectureship, UT Austin	2022
Blavatnik National Award Laureate – Chemistry	2021
Mislow Honorary Lectureship, Princeton University	2021
Fellow of the Royal Society of Chemistry (FRSC)	2021
Blavatnik National Awards Finalist – Chemistry	2018
ACS Award in Pure Chemistry	2018
Alan T. Waterman Award – National Science Foundation	2016
Camille Dreyfus Teacher-Scholar Award	2016
Dalton Lectureship – UC Berkeley	2016
Dream Chemistry Award (Polish Academy of Sciences)	2015
ExxonMobil ACS Solid State Chemistry Faculty Fellowship	2015
NSF CAREER Award	2015
Keith Fagnou Lectureship – University of Ottawa	2015
Cottrell Scholar Award – Research Corporation for Science Advancement	2014
Alfred P. Sloan Research Fellowship	2014
Dreyfus Fellowship in Environmental Chemistry	2013
3M Non-Tenured Faculty Award	2013
Selected US (ACS) Representative for Transatlantic Frontiers of Chemistry Conference	2013
MIT Technology Review TR-35 Award	2012
DOE Young Investigator Award	2011
ICMR International Research Fellowship	2008
ITRI/Berkeley Research Center Predoctoral Fellowship, UC Berkeley	2006-2008
ICMR Travel Grant, Hydrogen Storage Symposium, Santa Barbara, CA	2006
ICYS-ICMR Travel Grant, Summer School on Nanomaterials, Tsukuba, Japan	2006
ACS Fuel Division Travel Grant, ACS Meeting, San Francisco, CA	2006
Everett S. Wallis Prize in Organic Chemistry, Princeton University	2003
First Prize, Tuymaada International Science Olympiad (Chemistry), Yakutsk, Russia	1998

Publications

(Google Scholar citations: ~38,000; *h*-index: 86; <https://scholar.google.com/citations?hl=en&user=RWC2ERYAAAAJ>)

- (191) Oppenheim, J. J.; Ho, C.-H.; Alezi, D.; Andrews, J. L.; Chen, T.; Dinakar, B.; Paesani, F.; **Dincă, M.** “Cooperative Interactions with Water Drive Hysteresis in a Hydrophilic Metal-Organic Framework”
Submitted.
- (190) Roh, H.; Kim, D.-H.; Cho, Y.; Jo, Y.-M.; del Alamo, J.; Kulik, H.; **Dincă, M.**; Gumyusenge, A. “Robust Chemiresistive Behavior in Conductive Polymer/MOF Composites”
Submitted.

- (189) Iliescu, A.; Andrews, J. L.; Oppenheim, J. J.; **Dincă, M.** "A Solid Zn-Ion Conductor from an All-Zinc MOF Replete with Mobile Zn²⁺ Cations"
J. Am. Chem. Soc. **2023**, *145*, in press.
- (188) Chen, T.; Banda, H.; Wang, J.; Oppenheim, J. J.; Franceschi, A.; **Dincă, M.** "A layered organic cathode for high-energy, fast-charging, and long-lasting Li-ion batteries"
Submitted.
- (187) Alezi, D.; Oppenheim, J. J.; Sarver, P. J.; Iliescu, A.; Dinakar, B.; **Dincă, M.** "Tunable low–relative humidity and high–capacity water adsorption in a bibenzotriazole metal-organic framework"
J. Am. Chem. Soc. **2023**, *145*, 25233-25241. <https://doi.org/10.1021/jacs.3c08335>
- (186) Apostol, P.; Gali, S. M.; Su, A.; Tie, D.; Zhang, Y.; Pal, S.; Lin, X.; Bakuru, V. R.; Rambabu, D.; Beljonne, D.; **Dincă, M.**; Vlad, A. "Controlling Electronic Coupling in 2D Conductive MOFs: The Role of Nitrogen-Rich Ligands and Chemical Functionality"
J. Am. Chem. Soc. **2023**, *145*, 24669-24677. <https://doi.org/10.1021/jacs.3c07503>
- (185) Kadota, K.; Chen, T.; Gormley, E.; Hendon, C. H.; **Dincă, M.**; Brozek, C. K. "Electrically Conductive [Fe₄S₄]-based Organometallic Polymers"
Chem. Sci. **2023**, *14*, 11410-11416. <https://doi.org/10.1039/D3SC02195E>
- (184) Wan, R.; Mankus, D.; Lee, W. S.; Lytton-Jean, A. K. R.; Tisdale, W. A.; **Dincă, M.** "Dipole-dependent Waveguiding in an Anisotropic Metal–Organic Framework"
J. Am. Chem. Soc. **2023**, *145*, 19042-19048. <https://doi.org/10.1021/jacs.3c06678>
- (183) He, X.; Iliescu, A.; Yang, T.; Arguilla, M. Q.; Chen, T.; Kulik, H. J.; **Dincă, M.** "Reversible O–O Bond Scission and O₂ Evolution at MOF-supported Tetramanganese Clusters"
J. Am. Chem. Soc. **2023**, *145*, 16872-16878. <https://doi.org/10.1021/jacs.3c05374>
- (182) Yang, G. G.; Kim, D.-H.; Samal, S.; Choi, J.; Roh, H.; Cunin, C. E.; Lee, H. M.; Kim, S. O.; **Dincă, M.**; Gumyusenge, A. "Polymer-based thermally stable chemiresistive sensor for real-time monitoring of NO₂ gas emission"
ACS Sensors **2023**, *8*, 3687-3692. <https://doi.org/10.1021/acssensors.3c01530>
- (181) Iliescu, A.; Oppenheim, J. J.; Sun, C.; **Dincă, M.** "Conceptual and Practical Aspects of Metal-Organic Frameworks for Solid-Gas Reactions"
Chem. Rev. **2023**, *123*, 6197-6232. <https://doi-org/10.1021/acs.chemrev.2c00537>
- (180) Valentine, M. L.; Yin, G.; Oppenheim, J. J.; **Dincă, M.**; Xiong, W. "Ultrafast Water H-Bond Rearrangement in a Metal–Organic Framework Probed by Femtosecond Time-Resolved Infrared Spectroscopy"
J. Am. Chem. Soc. **2023**, *145*, 11482-11487. <https://doi-org/10.1021/jacs.3c01728>
- (179) Chen, T.; Banda, H.; Yang, L.; Li, J.; Zhang, Y.; Parenti, R.; **Dincă, M.** "High-rate, high-capacity electrochemical energy storage in hydrogen-bonded fused aromatics"
Joule **2023**, *7*, 986-1002. <https://doi.org/10.1016/j.joule.2023.03.011>
- (178) Widera, A.; Thöny, D.; Aebli, M.; Oppenheim, J. J.; Andrews, J. L.; Eiler, F.; Wörle, M.; Schönberg, H.; Weferling, N.; **Dincă, M.**; Grützmacher, H. "Solid-State Investigation, Storage, and Purification of Pyrophoric PH₃ and P₂H₄ with α-Mg Formate"
Angew. Chem. Int. Ed. **2023**, *62*, e202217534. <https://doi-org/10.1002/anie.202217534>
- (177) Pearson, M. A.; Bhagchandani, S.; **Dincă, M.**; Johnson, J. A. "A Mixed Ligand Approach Enhances Gas Uptake in PolyMOFs"
Molec. Syst. Des. Eng. **2023**, *8*, 591-597. <https://doi.org/10.1039/D2ME00227B>
- (176) Kampouri, S.; Zhang, M.; Chen, T.; Oppenheim, J. J.; Brown, A. C.; Payne, M.; Sun, J.; **Dincă, M.** "Pyrogallate-Based Metal-Organic Framework with a Two-Dimensional Secondary Building Unit"
Angew. Chem. Int. Ed. **2022**, *61*, e202213960. <https://doi.org/10.1002/anie.202213960>.
- (175) Sun, L.; Yang, L. Dou, J.-H.; Li, J.; Skorupskii, G.; Mardini, M.; Tan, K. O.; Chen, T.; Sun, C.; Oppenheim, J. J.; Griffin, R. G.; **Dincă, M.**; Rajh, T. "Room-Temperature Quantitative Quantum Sensing of Lithium Ions with a Radical-Embedded Metal–Organic Framework"
J. Am. Chem. Soc. **2022**, *144*, 19008-19016. <https://doi.org/10.1021/jacs.2c07692>.
- (174) Tan, K. O.; Yang, L.; Mardini, M.; Cheong, C. B.; Driesschaert, B.; **Dincă, M.**; Griffin, R. G. "Observing Nearby Nuclei on Paramagnetic Trityls and MOFs via DNP and Electron Decoupling"
Chem. Eur. J. **2022**, *28*, e202202556. <https://doi.org/10.1002/chem.202202556>.
- (173) Skorupskii, G.; Chanteux, G.; Le, K. N.; Stassen, I.; Hendon, C. H.; **Dincă, M.** "Electrical conductivity through π-π stacking in a two-dimensional porous gallium catecholate framework"
Ann. N. Y. Acad. Sci. **2022**, *1518*, 226-230. <https://doi.org/10.1111/nyas.14906>.
- (172) Wan, R.; Ha, D. G.; Dou, J.-H.; Li, J.; Chen, T.; Tisdale, W. A.; **Dincă, M.** "Dipole-Mediated Exciton Management Strategy Enabled by Reticular Chemistry"

- Chem. Sci.* **2022**, *13*, 10792-10797. <https://doi.org/10.1039/D2SC01127A>.
- (171) Skorupskii, G.; Le, K.; Cordova, D. L. M.; Yang, L.; Chen, T.; Hendon, C. H.; Arguilla, M. Q.; **Dincă, M.** "Porous lanthanide metal-organic frameworks with metallic conductivity"
Proc. Nat. Acad. Sci. USA **2022**, *119*, e2205127119. <https://doi.org/10.1073/pnas.2205127119>.
- (170) Mariano, R. G.; Rabinowitz, J. A.; Oppenheim, J. J.; Chen, T.; **Dincă, M.** "Thousand-fold increase in O₂ electroreduction rates with conductive MOFs"
ACS Cent. Sci. **2022**, *8*, 975-982. <https://doi.org/10.1021/acscentsci.2c00509>.
- (169) Yang, L.; Oppenheim, J. J.; **Dincă, M.** "Strong Magnetic Exchange Coupling in a Radical-Bridged Trinuclear Nickel Complex"
Dalton Trans. **2022**, *51*, 8583-8587. <https://doi.org/10.1039/D2DT01337A>.
- (168) Berry, T.; Morey, J. R.; Arpino, K. E.; Dou, J.-H.; Felser, C.; **Dincă, M.**; McQueen, T. M. "Thermodynamic and transport properties of two-dimensional metal-organic Kagomé lattices with disorder"
Inorg. Chem. **2022**, *61*, 6480-6487. <https://doi.org/10.1021/acs.inorgchem.2c00081>.
- (167) Osterrieth, J.; ... Sun, C.; **Dincă, M.**; Fairen-Jimenez, D. *et al.* "How reproducible are surface areas calculated from the BET equation?"
Adv. Mater. **2022**, *34*, 2201502. <https://doi.org/10.1002/adma.202201502>.
- (166) Ha, D.-G.; Wan, R.; Kim, A. C.; Yang, L.; Van Voorhis, T.; Baldo, M. A.; **Dincă, M.** "Exchange controlled triplet fusion in metal-organic frameworks"
Nature Mater. **2022**, *21*, 1275-1281. <https://doi.org/10.1038/s41563-022-01368-1>.
- (165) Chen, T.; Dou, J.-H.; Yang, L.; Sun, C.; Oppenheim, J. J.; Li, J.; **Dincă, M.** "Dimensionality Modulates Electrical Conductivity in Compositionally Constant One-, Two-, and Three-Dimensional Frameworks"
J. Am. Chem. Soc. **2022**, *144*, 5583-5593. <https://doi.org/10.1021/jacs.2c00614>.
- (164) Fritz, P.; Chen, T.; Ashirov, T.; Nguyen, A.-D.; **Dincă, M.**; Coskun, A. "Fully Conjugated Tetraoxa[8]circulene-Based Porous Semiconducting Polymers"
Angew. Chem. Int. Ed. **2022**, *61*, e202116527. <https://doi.org/10.1002/anie.202116527>.
- (163) Kharod, R. A.; Andrews, J. L.; **Dincă, M.** "Teaching metal-organic frameworks to conduct: Ion and electron transport in MOFs"
Annu. Rev. Mater. Res. **2022**, *52*, 103-128. <https://doi.org/10.1146/annurev-matsci-080619-012811>.
- (162) Sun, C.; Oppenheim, J. J.; Skorupskii, G.; Yang, L. M.; **Dincă, M.** "Reversible Topochemical Polymerization and Depolymerization of a Crystalline 3D Porous Organic Polymer with C-C Bond Linkages"
Chem **2022**, *8*, 3215-3224. <https://doi.org/10.1016/j.chempr.2022.07.028>.
- (161) Pearson, M. A.; **Dincă, M.**; Johnson, J. A. "Radical PolyMOFs: A Role for Ligand Dispersity in Enabling Crystallinity"
Chem. Mater. **2021**, *33*, 9508-9514. <https://doi.org/10.1021/acs.chemmater.1c02411>.
- (160) Oppenheim, J. J.; Bagi, S.; Chen, T.; Sun, C.; Yang, L.; Muller, P.; Roman-Leshkov, Y.; **Dincă, M.** "Isolation of a rare side-on V(III)-(η²-O₂) through the intermediacy of a low-valent V(II) in a metal-organic framework"
Inorg. Chem. **2021**, *60*, 18205-18210. <https://doi.org/10.1021/acs.inorgchem.1c02850>.
- (159) Qu, Y.; Arguilla, M. Q.; Zhang, Q.; He, X.; **Dincă, M.** "Ultrathin, High-Aspect Ratio, and Free-Standing Magnetic Nanowires by Exfoliation of Ferromagnetic Quasi-One Dimensional van der Waals Lattices"
J. Am. Chem. Soc. **2021**, *143*, 19551-19558. <https://doi.org/10.1021/jacs.1c09607>.
- (158) Oppenheim, J. J.; Mancuso, J. L.; Wright, A. M.; Rieth, A. J.; Hendon, C. H.; **Dincă, M.** "Divergent Adsorption Behavior Controlled by Primary Coordination Sphere Anions in the Metal-Organic Framework, Ni₂X₂BTDD"
J. Am. Chem. Soc. **2021**, *143*, 16343-16347. <https://doi.org/10.1021/jacs.1c07449>.
- (157) Banda, H.; Dou, J.-H.; Chen, T.; Zhang, Y.; **Dincă, M.** "Dual-ion intercalation and high volumetric capacitance in a two-dimensional non-porous coordination polymer"
Angew. Chem. Int. Ed. **2021**, *60*, 27119-27125. <https://doi.org/10.1002/anie.202112811>.
- (156) Yang, L.; **Dincă, M.** "Redox ladder of Ni₃ complexes with closed-shell, mono-, and diradical triphenylene units: molecular models for conductive 2D MOFs"
Angew. Chem. Int. Ed. **2021**, *60*, 23784-23789. <https://doi.org/10.1002/anie.202109304>.
- (155) Neumann, C. N.; Payne, M. T.; Rozeveld, S.; Wu, Z.; Zhang, G.; Comito, R. J.; Miller, J. T.; **Dincă, M.** "Structural Evolution of MOF-Derived RuCo, a General Catalyst for the Guerbet Reaction"
ACS Appl. Mater. Interf. **2021**, *7*, 52113-52124. <https://doi.org/10.1021/acsami.1c09873>.
- (154) Qian, Q.; Wright, A. M.; **Dincă, M.**; Smith, Z. P. "Low-Temperature H₂S/CO₂/CH₄ Separation in Mixed-Matrix Membranes Containing MFU-4l"
Chem. Mater. **2021**, *33*, 6825-6831. <https://doi.org/10.1021/acs.chemmater.1c01533>.
- (153) Payne, M. T.; Neumann, C. N.; Stavitski, E.; **Dincă, M.** "Complexes of Platinum Group Metals with a Conformationally Locked Scorpionate in a Metal Organic Framework: An Unusually Close Apical Interaction of Pd(II)"
Inorg. Chem. **2021**, *60*, 11764-11774. <https://doi.org/10.1021/acs.inorgchem.1c00941>.

- (152) Lyu, P.; Wright, A.; López-Olvera, A.; Mileo, P. G. M.; Zárate, J. A.; Martínez-Ahumada, E.; Williams, D. R.; Martis, V.; **Dincă, M.**; Maurin, G.; Ibarra, I. A. "Ammonia capture via an unconventional reversible guest-induced metal-linker bond dynamics in a highly stable Metal-Organic Framework"
Chem. Mater. **2021**, *33*, 6186-6192. <https://doi.org/10.1021/acs.chemmater.1c01838>.
- (151) Protesescu, L.; Calbo, J.; Williams, K.; Tisdale, W.; Walsh, A.; **Dincă, M.** "Colloidal Nano-MOFs Nucleate and Stabilize Ultra-Small Quantum Dots of Lead Bromide Perovskites"
Chem. Sci. **2021**, *12*, 6129-6135. <https://doi.org/10.1039/D1SC00282A>.
- (150) Neumann, C. N.; Rozeveld, S. J.; **Dincă, M.** "MOF-Derived RuCo Catalyzes the Formation of Plasticizer Alcohol from Renewable Precursors"
ACS Catal., **2021**, *11*, 8521-8526. <https://doi.org/10.1021/acscatal.1c01391>.
- (149) Freund, R.; Zaremba, O.; Arnauts, G.; Ameloot, R.; Skorupskii, G.; **Dincă, M.**; Bavykina, A.; Gascon, J.; Ejsmont, A.; Gościańska, J.; Kalmutzki, M.; Lächelt, U.; Ploetz, E.; Diercks, C. S.; Wuttke, S. "The Current Status of MOF and COF Applications after 25 Years"
Angew. Chem. Int. Ed. **2021**, *60*, 23975-24001. <https://doi.org/10.1002/anie.202106259>.
- (148) Bagi, S.; Wright, A. M.; **Dincă, M.**; Román-Leshkov, Y. "Accelerated synthesis of a Ni₂Cl₂(BTDD) metal-organic framework in a continuous flow reactor for atmospheric water capture"
ACS Sust. Chem. Eng. **2021**, *9*, 3996-4003. <https://doi.org/10.1021/acssuschemeng.0c07055>.
- (147) Borysiewicz, M. A.; Dou, J.-H.; Stassen, I.; **Dincă, M.** "Why conductivity is not always king - physical properties governing the capacitance of 2-D Metal-Organic Framework - based EDLC supercapacitor electrodes: a Ni₃(HITP)₂ case study"
Faraday Disc. **2021**, *231*, 298-304. <https://doi.org/10.1039/D1FD00028D>.
- (146) Banda, H.; Dou, J.-H.; Chen, T.; Libretto, N. J.; Chaudhary, M.; Bernard, G. M.; Miller, J. T.; Michaelis, V. K.; **Dincă, M.** "High capacitance supercapacitors from Li⁺ intercalation in non-porous, electrically conductive 2D coordination polymers"
J. Am. Chem. Soc. **2021**, *143*, 2285-2292. <https://doi.org/10.1021/jacs.0c10849>.
- (145) Sun, C.; Yang, L.; Ortuno, M. A.; Wright, A. M.; Chen, T.; Head, A. R.; Lopez, N.; **Dincă, M.** "Spectroscopic Evidence of Hyponitrite Radical Intermediate in NO Disproportionation at a MOF-supported Mononuclear Copper Site"
Angew. Chem. Int. Ed. **2021**, *60*, 7845-7850. <https://doi.org/10.1002/anie.202015359>.
- (144) Wright, A. M.; Sun, C.; **Dincă, M.** "Thermal Cycling of a MOF-Based NO Disproportionation Catalyst"
J. Am. Chem. Soc. **2021**, *143*, 681-686. <https://doi.org/10.1021/jacs.0c12134>.
- (143) Ha, D.-G.; Rezaee, M.; Han, Y.; Siddiqui, S. A.; Day, R. W.; Xie, L. S.; Modtland, B. J.; Muller, D. A.; Kong, J.; Kim, P.; **Dincă, M.**; Baldo, M. A. "Large single crystals of a two-dimensional π-conjugated metal-organic framework via biphasic solution-solid growth"
ACS Central Sci. **2021**, *7*, 104-109. <https://doi.org/10.1021/acscentsci.0c01488>.
- (142) Dou, J.-H.; Arguilla, M. Q.; Luo, Y.; Li, J.; Zhang, W.; Sun, L.; Mancuso, J. L.; Yang, L.; Chen, T.; Parent, L. R.; Skorupskii, G.; Libretto, N. J.; Sun, C.; Miller, J. T.; Kong, J.; Hendon, C. H.; Sun, J.; **Dincă, M.** "Atomically Precise Single Crystal Structures of Electrically Conducting 2D MOFs"
Nature Mater. **2021**, *20*, 222-228. <https://doi.org/10.1038/s41563-020-00847-7>.
- (141) Korzyński, M. D.; Xie, L. S.; **Dincă, M.** "Structural Characterization of a High-Nuclearity Niobium(V) Carboxylate Cluster Based on Pivalic Acid"
Helv. Chim. Acta. **2020**, *103*, e2000186. <https://doi.org/10.1002/hlca.202000186>.
- (140) Oppenheim, J. J.; Skorupskii, G.; **Dincă, M.** "Aperiodic Metal-Organic Frameworks"
Chem. Sci. **2020**, *11*, 11094-11103. <https://doi.org/10.1039/D0SC04798H>.
- (139) **Dincă, M.**; Long, J. R. "Introduction: Porous Framework Chemistry"
Chem. Rev. **2020**, *120*, 8037-8038. (Editorial) <https://doi.org/10.1021/acs.chemrev.0c00836>.
- (138) Chen, T.; Dou, J.-H.; Yang, L.; Sun, C.; Libretto, N. J.; Skorupskii, G.; Miller, J. T.; **Dincă, M.** "Continuous Electrical Conductivity Variation in M₃(hexaiminotriphenylene)₂ (M = Co, Ni, Cu) MOF Alloys"
J. Am. Chem. Soc. **2020**, *142*, 12367-12373. <https://doi.org/10.1021/jacs.0c04458>.
- (137) Byun, Y.; Xie, L. S.; Fritz, P.; Ashirov, T.; **Dincă, M.**; Coskun, A. "Three-dimensional Porous Organic Semiconductor Based on Fully sp²-Hybridized Graphitic Polymer"
Angew. Chem. Int. Ed. **2020**, *59*, 15166-15170. <https://doi.org/10.1002/anie.202005069>.
- (136) Xie, L. S.; Park, S. S.; Chmielewski, M. J.; Liu, H.; Kharod, R. A.; Yang, L.; Campbell, M. G.; **Dincă, M.** "Isorecticular Linker Substitution in Conductive Metal-Organic Frameworks with Through-Space Transport Pathways"
Angew. Chem. Int. Ed. **2020**, *59*, 19791-19794. <https://doi.org/10.1002/anie.202004697>.
- (135) Shen, J.; He, X.; Ke, T.; Krishna, R.; Bao, Z.; Xing, H.; **Dincă, M.**; Zhang, Z.; Yang, Q.; Ren, Q. "Simultaneous interlayer and intralayer space control in two-dimensional metal-organic frameworks for acetylene/ethylene separation"
Nature Commun. **2020**, *11*, 6259(1-10). <https://doi.org/10.1038/s41467-020-20101-7>.
- (134) Skorupskii, G.; **Dincă, M.** "Electrical conductivity in a porous, cubic rare-earth catecholate"

- J. Am. Chem. Soc.* **2020**, *142*, 6920-6924. <https://doi.org/10.1021/jacs.0c01713>.
- (133) He, X.; Looker, B. G.; Dinh, K. T.; Stubbs, A. W.; Chen, T.-Y.; Meyer, R. J.; Serna, P.; Roman-Leshkov, Y.; Lancaster, K. M.; **Dincă, M.** "Cerium(IV) Enhances the Catalytic Oxidation Activity of Single-Site Cu Active Sites in MOFs" *ACS Catal.* **2020**, *10*, 7820-7825. <https://doi.org/10.1021/acscatal.0c02493>.
- (132) Bechu, D.; Xie, L. S.; Le Breton, N.; Choua, S.; **Dincă, M.**; Hosseini, M. W.; Baudron, S. A. "Interdigitated conducting tetrathiafulvalene-based coordination networks" *Chem. Commun.* **2020**, *56*, 2407-2410. <https://doi.org/10.1039/C9CC09960C>.
- (131) Bour, J. R.; Wright, A. M.; He, X.; **Dincă, M.** "Bioinspired Chemistry at MOF Secondary Building Units" *Chem. Sci.* **2020**, *11*, 1728-1737. <https://doi.org/10.1039/C9SC06418D>.
- (130) Xie, L. S.; Skorupskii, G.; **Dincă, M.** "Electrically Conductive Metal-Organic Frameworks" *Chem. Rev.* **2020**, *120*, 8536-8580. (Review) <https://doi.org/10.1021/acs.chemrev.9b00766>.
- (129) Bi, S.; Banda, H.; Chen, M.; Niu, L.; Chen, M.; Wu, T.; Wang, J.; Wang, R.; Feng, J.; Chen, T.; **Dincă, M.**; Kornyshev, A. A.; Feng, G. "Molecular understanding of charge storage and charging dynamics in supercapacitors with MOF electrodes and ionic liquid electrolytes" *Nature Mater.* **2020**, *19*, 552-558. <https://doi.org/10.1038/s41563-019-0598-7>.
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- (127) Park, H. D.; Comito, R. J.; Wu, Z.; Zhang, G.; Rieke, N. D.; Sun, C.; Van Voorhis, T.; Miller, J. T.; Román-Leshkov, Y.; **Dincă, M.** "Gas Phase Ethylene Polymerization by Single-Site Cr Centers in a Metal-Organic Framework" *ACS Catal.* **2020**, *10*, 3864-3870. <https://doi.org/10.1021/acscatal.9b03282>.
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Graduate and postdoctoral studies:

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J. Am. Chem. Soc. **2006**, *128*, 8904-8913.
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J. Am. Chem. Soc. **2005**, *127*, 9376-9377.
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Patents/Patent Applications

- (1) Nocera, D. G.; Kanan, M. W.; Surendranath, Y.; **Dincă, M.** "Catalyst Compositions and Electrodes for Photosynthesis Replication and Other Electrochemical Techniques" **2009** – US Patent Serial No. 12/486,694.
- (2) **Dincă, M.**; Li, M. "Methods for Electrochemically Induced Cathodic Deposition of Crystalline Metal-Organic Frameworks" – US Patent Serial No. 13/439,355, US Patent 8,764,887 (**2014**).
- (3) **Dincă, M.**; Wade, C. R. "Compositions and methods comprising porous metal-organic frameworks and related uses" **2014** – US Patent Application No. 14/270,385.
- (4) **Dincă, M.**; Sheberla, D.; Sun, L.; Wade, C. R.; Campbell, M. G. "Compositions and methods comprising conductive metal-organic frameworks and uses thereof" **2014** – Patent #: US10174063 (issued Jan 8, **2018**); US Patent #10,822,364 (issued Nov 20, **2020**).
- (5) **Dincă, M.**; Metzger, E. M.; Brozek, C. K. "Compositions and methods for selective olefin oligomerization comprising metal-organic frameworks" **2016** – US Provisional Application 62/218,003; (issued Dec 3, **2019**; US Patent 10,493,441).
- (6) **Dincă, M.**; Comito, R. J. "Compositions and methods for olefin polymerization comprising metal-organic frameworks" (Filing Date **2016** – US Patent Appl. 62/218,003 and 62/306,028; (issued 10/15/**2019**: US Patent #10,442,875)
- (7) **Dincă, M.**; Rieth, A. J.; Tulchinsky, Y. "Compositions comprising metal-organic frameworks for the uptake of compounds and related methods" **2016** – Patents US 2017/0341010 A1; WO 2017/205752.
- (8) **Dincă, M.**; Roman-Leshkov, Y.; Park, H. "Compositions comprising metal-organic frameworks and related methods and uses including heterogeneous catalysis" **2016** – US Provisional patent 62/403,938.
- (9) **Dincă, M.**; Dou, J.-H.; Borysiewicz, M.; Parenti, R.; Banda, H. "Metal-Organic Frameworks for Supercapacitor Electrodes" (USPTO Filing Date 09/30/2019, US Provisional # 62/908,297) – issued 8/23/2022 (US Patent #11424083)
- (10) **Dincă, M.**; Neumann, C. M. "Methods and Compositions for the Catalytic Upgrading of Alcohols" (US Patent Number 10,882,807 issued 1/5/2021).
- (11) **Dincă, M.**; Chen, T.; Banda, H. "Fused Aromatic Molecules as Electrode Materials" (International Appl. PCT/US2022/01395, 01/2022)
- (12) **Dincă, M.**; Mariano, R. "Metal-Organic Framework on Gas Diffusion Electrode" (US Patent Application 17/828,646, May 2022)
- (13) **Dincă, M.**; Chen, T.; Banda, H. "Rechargeable Batteries, Including Organic Batteries" (Provisional US Patent 63/410,461, 10/2022).

Invited Lectures (past and future scheduled)

- (1) University of Maryland, Department of Chemistry – College Park MD, March **2024**
- (2) Cornell University, *Baker Lecturer* – Ithaca NY, October **2023**
- (3) Nobel Symp. NS-193 "MOFs: Fundamental science enabling transformative materials" – Karlskoga Sweden, Sept **2023**
- (4) Uppsala University – Uppsala, Sweden, Sept **2023**
- (5) EuroMOF 2023 – Granada, Spain – September **2023**
- (6) Carnegie Mellon University – Pittsburgh PA, September **2023**
- (7) University of Oregon, Department of Chemistry – Eugene OR, June **2023**
- (8) MedPORE, 1st Mediterranean Porous Materials Conference – Crete, Greece, May **2023**
- (9) Gislason Lecturer in Physical and Analytical Chemistry and Energy Sciences – Univ. of Illinois Chicago, April **2023**
- (10) ACS National Meeting, Symposium in honor of Christopher Cummins – Indianapolis IN, March **2023**
- (11) University of North Texas – Denton TX, February **2023**
- (12) University of Texas at Dallas – Richardson TX, February **2023** (student-invited speaker)
- (13) ISCOM Congres 2022 – Le Pouliguen, France, September **2022**
- (14) University of Angers – Angers, France, September **2022**
- (15) Department of Chemistry, Colorado School of Mines – Golden CO, August **2022**
- (16) International Symposium on Porous Organic Polymers (POPs 2022) – Boulder CO, August **2022**
- (17) 5th International Conference on Materials & Environmental Science – Morocco (remote), June **2022**
- (18) *Lagow Lecture*, University of Texas – Austin TX, March **2022**
- (19) *Mislow Honorary Lectureship*, Princeton University – Princeton NJ, November **2021**
- (20) EuroMOF 2021 – Poland, September **2021** (keynote speaker, remote)
- (21) Technical University of Munich (TUM) – Munich, Germany, September **2021**
- (22) Université de Pau et des Pays de l'Adour (UPPA) – Pau, France, July **2021**
- (23) 1st POSTECH CHEMISTRY SYMPOSIUM SERIES (PCSS) – POSTECH, South Korea, August **2021** (remote)
- (24) Clarkson University, Dept. of Chemistry and Biomolecular Science – Potsdam NY, February **2021** (remote)
- (25) KAIST Emerging Materials e-Symposium – KAIST, South Korea, September **2020** (remote)
- (26) 2020 Clean Energy Institute Conference on Energy Conversion & Storage – Seattle WA, September **2020** (remote)
- (27) Université de Montpellier – Montpellier, France, February **2020**
- (28) University of Groningen, Zernike Institute for Advanced Materials – Groningen, Netherlands, February **2020**
- (29) NYU Abu Dhabi – Abu Dhabi, United Arab Emirates, January **2020**
- (30) Chem2Dmat International Conference – Dresden, Germany, September **2019** (keynote)
- (31) 111 Project, Jilin University – Changchun, China, August **2019**
- (32) Northeast Normal University – Changchun, China, August **2019**
- (33) Uppsala University – Uppsala, Sweden, June **2019** (student-invited)
- (34) Stockholm University – Stockholm, Sweden, June **2019**
- (35) Gordon Research Conference: Self-Assembly and Supramolecular Chemistry – Les Diablerets, Switzerland, May **2019**

- (36) Simon Fraser University – Victoria BC, Canada, March **2019** (student-invited)
- (37) University of British Columbia – Vancouver BC, Canada, March **2019**
- (38) University of Victoria – Victoria BC, Canada, March **2019**
- (39) University of Massachusetts – Lowell MA, March **2019**
- (40) University of Colorado – Boulder CO, February **2019**
- (41) University of California – Irvine CA, February **2019**
- (42) University of California – Riverside CA, February **2019**
- (43) ITQ – Valencia, Spain, January **2019**
- (44) The Dow Chemical Company – Midland MI, September **2018**
- (45) International Conference on Coordination Chemistry – Sendai, Japan, August **2018**
- (46) Jilin University – Changchun, China, August **2018**
- (47) Chongqing Normal University – Chongqing, China, July **2018**
- (48) Chongqing University – Chongqing, China, July **2018**
- (49) Max Planck Institute for Solid State Research – Stuttgart, Germany, May **2018**
- (50) Ludwig Maximilian University – Munich, Germany, May **2018**
- (51) University of Liverpool, Department of Chemistry – Liverpool, UK, April **2018**
- (52) Ecole Polytechnique Federale Lausanne (EPFL) – Lausanne, Switzerland, April **2018**
- (53) 255th ACS National Meeting – New Orleans LA, March **2018**
- (54) University of Fribourg – Fribourg, Switzerland, March **2018**
- (55) ETH Zurich – Zurich, Switzerland, March **2018**
- (56) NRG2018, Challenges and Opportunities in Energy Research – Sion, Switzerland, March **2018**
- (57) University of Strasbourg – Strasbourg, France, February **2018**
- (58) Paul Scherer Institute – Viligen, Switzerland, February **2018**
- (59) Institut Català de Nanociència i Nanotecnologia (ICN2) – Barcelona, Spain, January **2018**
- (60) University of Pittsburgh – Pittsburgh PA, November **2017**
- (61) Wayne State University, Department of Chemistry – Detroit MI, November **2017**
- (62) University of Texas - San Antonio, Department of Chemistry – San Antonio TX, November **2017**
- (63) Texas A&M University, Department of Chemistry – College Station TX, November **2017**
- (64) Dartmouth University, Department of Chemistry – Hanover NH, September **2017**
- (65) US-Japan Bilateral Meeting/JSSC Meeting, Hokkaido Univ. – Sapporo, Japan, September **2017**
- (66) Tohoku University – Sendai, Japan, September **2017**
- (67) Romanian International Conference on Chemistry and Chemical Engineering – Brasov, Romania, September **2017**
- (68) 254th National ACS Meeting, Nocera 60th Symposium – Washington DC, August **2017**
- (69) Gordon Research Conference: Nanoporous Materials – Proctor Academy, NH, August **2017**
- (70) St. Petersburg State University – St. Petersburg, Russia, July **2017**
- (71) Moscow State University – Moscow, Russia, July **2017**
- (72) 100th Canadian Society Conference (CSC2017) – Toronto ON, May **2017**
- (73) 253rd National ACS Meeting, ACS *Central Science* Symposium – San Francisco CA, April **2017**
- (74) Aramco Research Division, KAUST Site – Thuwal, Saudi Arabia, February **2017**
- (75) New Materials Horizon Symposium, KAUST Research Conference – Thuwal, Saudi Arabia, February **2017**
- (76) International Workshop on Advanced Materials – Al Hamra Fort, Ras al Khaimah, UAE, February **2017**
- (77) Johns Hopkins University, Department of Chemistry – Baltimore MD, February **2017**
- (78) Colorado School of Mines, Department of Chemical and Biological Engineering – Golden CO, January **2017**
- (79) ETH Zurich – Switzerland, November **2016**
- (80) University of Wisconsin, Department of Chemistry – Madison WI, October **2016**
- (81) Washington State University, Chemical Engineering Department – Pullman WA, October **2016**
- (82) Tsinghua University – Beijing, China, August **2016**
- (83) Institute of Chemistry of the Chinese Academy of Sciences – Beijing, China, August **2016**
- (84) Peking University – Beijing, China, August **2016**
- (85) Fudan University – Shanghai, China, August **2016**
- (86) Shanghai Tech – Shanghai, China, August **2016**
- (87) Shanghai Jiaotong University – Shanghai, China, August **2016**
- (88) Changchun Institute of Applied Chemistry – Changchun, China, August **2016**
- (89) Northeast Normal University – Changchun, China, August **2016**
- (90) Gordon Research Conference: Solid State Chemistry – New London NH, July **2016**
- (91) Analog Devices, Inc. – Wilmington MA, July **2016**
- (92) Los Alamos National Laboratory – Los Alamos NM, July **2016**
- (93) Gordon Research Conference: Crystal Engineering – Stowe VT, June **2016**
- (94) Cambridge University, Department of Chemistry – Cambridge, UK, June **2016**
- (95) Imperial College, Condensed Matter Colloquium – London, UK, June **2016**
- (96) University of Kent – Canterbury, England, June **2016**
- (97) Universite Catholique de Louvain – Louvain, Belgium, June **2016**
- (98) KU Leuven – Leuven, Belgium, June **2016**
- (99) Ghent University – Ghent, Belgium, June **2016**
- (100) Michigan State University, Department of Chemistry – East Lansing MI, April **2016**

- (101) 251st National ACS Meeting, ExxonMobil ACS Solid State Fellowship Symposium (DIC) – San Diego, CA **2016**
- (102) University of California, Berkeley, *Dalton Lectureship* – Berkeley CA, March **2016**
- (103) Exxon Mobil Corporate Strategic Research – NJ, February **2016**
- (104) University of Bucharest, Department of Chemistry – Bucharest, Romania, February **2016**
- (105) Brandeis University, Department of Chemistry – Waltham MA, January **2016**
- (106) Pacificchem 2015 – Honolulu HI, December **2015**
- (107) University of Tokyo, Department of Chemistry – Tokyo, Japan, December **2015**
- (108) Natural Institute of Natural Sciences, Institute of Molecular Sciences – Okazaki, Japan, December **2015**
- (109) Kyushu University, Department of Chemistry and Biochemistry – Fukuoka, Japan, December **2015**
- (110) Kyoto University, Graduate School of Engineering – Kyoto, Japan, December **2015**
- (111) California Institute of Technology, Chemistry and Chemical Engineering – Pasadena CA, November **2015**
- (112) University of California, Department of Chemistry – Santa Barbara, November **2015**
- (113) University of Southern California – Los Angeles CA, November **2015**
- (114) University of California, Department of Chemistry and Biochemistry – Los Angeles CA, November **2015**
- (115) 1st EuroMOF Conference – Potsdam, Germany, October **2015 (plenary)**
- (116) Harvard University, Department of Chemistry and Chemical Biology – Cambridge MA, October **2015**
- (117) McGill University, Department of Chemistry – Montreal, Canada, September **2015**
- (118) Princeton University, Department of Chemistry – Princeton NJ, September **2015**
- (119) Indian Institute of Technology (IIT) Bombay – Mumbai, India, August **2015**
- (120) National Chemical Laboratory – Pune, India, August **2015**
- (121) Tata Institute of Fundamental Research – Mumbai, India, August **2015**
- (122) 250th National ACS Meeting, Colloids Division – Boston MA, August **2015**
- (123) 250th National ACS Meeting, Energy and Fuels Division – Boston MA, August **2015**
- (124) Gordon Research Conference: Nanoporous Materials – Holderness NH, August **2015**
- (125) *CrystEngComm* RSC Lecturer at Amer. Crystallogr. Assoc. National Meeting – Philadelphia PA, July **2015**
- (126) University of Bologna – Bologna, Italy, July **2015**
- (127) University of Calabria – Cosenza, Italy, July **2015**
- (128) University of Torino – Torino, Italy, July **2015**
- (129) Politecnico di Torino – Torino, Italy, July **2015**
- (130) University of Pennsylvania, Department of Chemistry – Philadelphia PA, May **2015**
- (131) University of California, Department of Chemistry – San Diego CA, May **2015**
- (132) University of Ottawa, *Keith Fagnou Lectureship* – Ottawa, Canada, March **2015**
- (133) Gordon Research Conference, Inorganic Reaction Mechanisms – Galveston TX, March **2015**
- (134) The Ohio State University, Department of Chemistry and Biochemistry – Columbus OH, March **2015**
- (135) University of South Florida, Department of Chemistry – Tampa FL, February **2015**
- (136) Columbia University, Department of Chemistry – New York NY, January **2015**
- (137) University of Chicago, Department of Chemistry – Chicago IL, January **2015**
- (138) New England Catalysis Meeting @ MIT – Cambridge MA, January **2015**
- (139) Yale University, Department of Chemistry – New Haven CT, November **2014**
- (140) University of California, Department of Chemistry – Berkeley CA, November **2014**
- (141) Stanford University, Department of Chemistry – Palo Alto CA, November **2014**
- (142) Northwestern University, Department of Chemistry – Evanston IL, November **2014**
- (143) University of Minnesota: Twin Cities, Department of Chemistry – Minneapolis MN, October **2014**
- (144) Macalester College, Department of Chemistry – St Paul MN, October **2014**
- (145) 3M – St. Paul MN, October **2014**
- (146) University of Iowa, Department of Chemistry – Iowa City IA, October **2014**
- (147) Korea University – Seoul, South Korea, October **2014**
- (148) MOF2014 Conference – Kobe, Japan, September **2014**
- (149) University of Florida – Gainesville FL, September **2014**
- (150) 248th ACS National Meeting: IC Lectureship (J.R. Long) Symposium – San Francisco, August **2014**
- (151) 248th ACS National Meeting: MOF Symposium (Energy & Fuels) – San Francisco, August **2014**
- (152) Gordon Research Conference, Electrodeposition – UNE, Biddeford ME, July **2014**
- (153) MOFs: Experiments and Simulations TSRC Workshop – Telluride CO, July **2014**
- (154) Gordon Research Conference, Inorganic Chemistry – UNE, Biddeford ME, June **2014**
- (155) Centre de Recherche Paul Pascal, University of Bordeaux – Bordeaux, France, June **2014**
- (156) Swiss Federal Institute of Technology (EPFL) – Lausanne, Switzerland, June **2014**
- (157) International Symposium on Nanostructured Functional Materials – Warsaw, Poland, June **2014**
- (158) Brown University, NSF Center for Chemical Innovation – Providence RI, May **2014**
- (159) Washington University in St Louis, Department of Chemistry – St Louis MO, March **2014**
- (160) University of Massachusetts, Department of Chemistry – Dartmouth MA, March **2014**
- (161) Worcester Polytechnic Institute, Department of Chemistry – Worcester MA, February **2014**
- (162) University of Texas El Paso, Department of Chemistry – El Paso TX, February **2014**
- (163) Texas A&M University, Department of Chemistry – College Station TX, February **2014**
- (164) University of Houston, Department of Chemistry – Houston TX, February **2014**
- (165) International Symposium on MOFs and Open Framework Materials – Zhuhai, China, December **2013**

- (166) Hong Kong University of Science and Technology (HKUST) – Hong Kong, December **2013**
- (167) Indiana University, Department of Chemistry – Bloomington IN, November **2013**
- (168) Johns Hopkins University, Department of Chemistry – Baltimore MD, November **2013**
- (169) University of Washington, Department of Chemistry – Seattle WA, October **2013**
- (170) Boston University, Materials Science and Engineering Colloquium – Boston MA, October **2013**
- (171) Pennsylvania State University, Department of Chemistry – State College PA, October **2013**
- (172) Transatlantic Frontiers of Chemistry (TFOC) – Kloster Seeon, Germany, August **2013**
- (173) Boston Regional Inorganic Symposium @ Strem – Newburyport MA, June **2013**
- (174) 245th ACS National Meeting: MOF Symposium – New Orleans LA, April **2013**
- (175) 245th ACS National Meeting: Cope Award (T. Agapie) Symposium – New Orleans LA, April **2013**
- (176) Kyoto University, Institute for Integrated Cell-Material Sciences – Kyoto, Japan, March **2013**
- (177) University of Tokyo, Department of Chemical System Engineering – Tokyo, Japan, March **2013**
- (178) Osaka University, Graduate School of Engineering – Osaka, Japan, February **2013**
- (179) Cabot Corporation – Billerica MA, January **2013**
- (180) MIT Department of Materials Science and Engineering – November **2012**
- (181) MIT Energy Initiative Conference – Cambridge MA, October **2012**
- (182) Tech Review EmTech Conference, TR-35 Symposium – Cambridge MA, October **2012**
- (183) DuPont Company – Wilmington DE, August **2012**
- (184) 244th ACS National Meeting: National Young Awardee Symposium – Philadelphia PA, August **2012**
- (185) National Institute of Standards and Technology – Gaithersburg MD, July **2012**
- (186) Institute of Chemical Technology (ITQ) – Valencia, Spain, May **2012**
- (187) Catalan Institute of Chemical Research (ICIQ) – Tarragona, Spain, May **2012**
- (188) MIT Bruker Symposium: Metal-Organic Frameworks – Cambridge MA, February **2012**
- (189) Mesilla Workshop in Inorganic Chemistry – Mesilla NM, February **2012**
- (190) Harvard Energy Conference – Cambridge MA, January **2012**
- (191) MIT Energy Initiative Seminar Series – Cambridge MA, October **2011**
- (192) MIT Center for Excitonics and Photonics Seminar Series – Cambridge MA, April **2011**
- (193) NSF Workshop on Frontiers in Crystalline Matter – Santa Barbara CA, March **2011**
- (194) University of Wisconsin, Department of Chemistry – Madison WI, January **2010**
- (195) Princeton University, Department of Chemistry – Princeton NJ, December **2009**
- (196) University of Michigan, Department of Chemistry – Ann Arbor MI, December **2009**
- (197) University of Illinois, Department of Chemistry – Urbana-Champaign IL, December **2009**
- (198) Yale University, Department of Chemistry – New Hartford CT, December **2009**
- (199) University of Washington, Department of Chemistry – Seattle WA, November **2009**
- (200) University of Chicago, Department of Chemistry – Chicago IL, November **2009**
- (201) University of Erlangen, Department of Chemistry – Nürnberg, Germany, November **2009**
- (202) Massachusetts Institute of Technology – Cambridge MA, October **2009**
- (203) Lawrence Berkeley National Laboratory Workshop on Nanoscale Assemblies – Berkeley CA, October **2007**