

CURRICULUM VITAE

Donglin Jiang

(Website) <https://blog.nus.edu.sg/chmjd/professor/>

Short Bio: Dr. Donglin Jiang has been widely recognized as pioneer in the area of covalent organic frameworks (COFs). Since 2005, Dr. Jiang has been devoted to the design, synthesis, and functional exploration of 2D polymers and COFs when he set up an independent laboratory in Institute for Molecular Science (IMS), National Institutes for Natural Sciences (NINS), Japan. Especially he has been a leading figure in establishing the basis of the field of COFs. He has explored the design principles of tetragonal, trigonal, Kagome and anisotropic COFs, the synthetic reactions including azine, phenazine, squaraine, and C=C linkages, and the materials and their structure-originated functions. Dr. Jiang has developed the first examples, including the semiconducting COFs, light-emitting COFs, photoconductive COFs, energy-storage COFs, asymmetric catalytic COFs, photocatalytic COFs, ion-conducting COFs and spin-functional COFs, thus greatly developing, expanding, and deepening the area.

1. Academic Positions

- 2 / 2018 – Provost's Chair, Professor, National University of Singapore
- 1 / 2016 – 2 / 2018 Professor, Japan Advanced Institute of Science and Technology
- 5 / 2005 – 12 / 2015 Associate Professor, Institute for Molecular Science (IMS), National Institutes of Natural Sciences (NINS), Japan
- 10 / 2000 – 4 / 2005 Group Leader, Strategic Basic Research Program, The Exploratory Research for Advanced Technology (ERATO), Japan Science and Technology Agency (JST), Japan
- 6 / 1998 – 9 / 2000 Assistant Professor, The University of Tokyo, Japan
- 10 / 2009 – 3 / 2013 Researcher, Strategic Basic Research Program, Precursory Research for Embryonic Science and Technology (PRESTO), JST, Japan
- 10 / 2005 – 3 / 2009 Researcher, Strategic Basic Research Program, PRESTO, JST, Japan
- 4 / 1997 – 6 / 1998 Young Scientist Fellowship, Japan Society for the Promotion of Science (JSPS), The University of Tokyo, Japan

2. Education

- 3 / 1998 Ph.D in Chemistry and Biotechnology, The University of Tokyo
- 6 / 1989 B.S. in Chemistry, Zhejiang University

3. Academic Honors, Awards and Fellowships

- 2023 The World's most highly cited researcher in Chemistry by Clarivate Analytics
- 2022 The World's most highly cited researcher in Chemistry by Clarivate Analytics
- 2022 Fellow of The European Academy of Sciences
- 2022 Provost's Chair
- 2021 Alexander von Humboldt Research Award
- 2021 The World's most highly cited researcher in Chemistry by Clarivate Analytics
- 2020 The World's most highly cited researcher in Chemistry by Clarivate Analytics
- 2019 The World's most highly cited researcher in Chemistry by Clarivate Analytics
- 2018 The World's most highly cited researcher in Chemistry by Clarivate Analytics
- 2017 The Chemical Society of Japan Award for Creative Work
- 2017 President Research Award, JAIST
- 2006 The Wiley Award of The Society of Polymer Science, Japan
- 2006 The Young Scientists' Prize, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science (MRXT), Japan
- 2005 Young Lectureship Award, The Chemical Society of Japan
- 2000 Excellent Lecture Award of Annual National Meeting, Chemical Society of Japan
- 1997 Young Scientist Fellowship, JSPS, Japan

4. Professional Membership and Editorial and Advisory Board Member

- Member of The American Chemical Society (1996 – present)
- Member of The Chemical Society of Japan (1994 – present)
- Member of The Society of Polymer Science, Japan (1998 – present)
- Editorial Advisory Board Committee Member, CCS Chemistry (2018 – present)
- Guest Editor, Chemical Society Review (2022, special issue on porous organic polymers)

5. Organization Chair and Committee of Symposiums and Conferences

- 2024, Organization committee, The 9th International Conference on Metal-Organic Frameworks and Open Framework Compounds (MOF2024), July 15-19 (2024). Singapore
- 2019, Organization Chair, The 10th Japan-China Joint Symposium on Functional Supramolecular Architecture, Institute for Molecular Science, Zhejiang University, June 7-10 (2019), China.
- 2019, Organization Chair, The International Workshop on Covalent Organic Frameworks, May 11-14, 2019, Tianjin University, China.

- 2018, Organization Committee, Symposium of MOFs and COFs in the 10th Singapore International Conference of Chemistry of (SICC-10), December 16-19 (2018)
- 2017, Organization Chair, Japan-China Joint Symposium on Functional Supramolecular Architecture, Institute for Molecular Science, Tianjin, China, February 23-26 (2017)
- 2016, Organization Chair, Japan-China Joint Symposium on Functional Supramolecular Architecture, Institute for Molecular Science, Okazaki, Japan, February 23-26 (2016)
- 2015, Organization Committee, Frontiers of Organic Porous Materials: Structures, Properties and Applications, Symposium 223 in Pacificchem 2015@Hawaii, Honolulu (2015)
- 2014, Organization Chair, China-Japan Joint Symposium on Functional Supramolecular Architecture, Tianjin University, December 10-14 (2014)
- 2014, Organization Committee, The 4th International Conference on Metal-Organic Frameworks and Open Framework Compounds, Kobe, Japan, September 28-October 2 (2014)
- 2013, Organization Chair, China-Japan Joint Symposium on Functional Supramolecular Architecture, Sooshow University, October 25-28 (2013)
- 2013, Organization Chair, Japan-China Joint Symposium on Functional Supramolecular Architecture, Okazaki, Jan 18-21 (2013)
- 2011, Organization Chair, China-Japan Joint Symposium on Functional Supramolecular Architecture, Beijing, October 6-10 (2011)
- 2010, Organization Chair, JSPS Asian Core Program China-Japan Joint Symposium on Functional Supramolecular Architecture, Changchun, July 25-28 (2010)
- 2009, Organization Chair, SOKENDAI Asian Winter School "Molecular Science – Central Roles in Multidisciplinary Fields", Okazaki, December 1-4 (2009)
- 2009, Organization Chair, JSPS Asian Core Program China-Japan Joint Symposium on Functional Supramolecular Architecture, Sapporo, Hokkaido, Japan, August 2-5 (2009)
- 2008, Organization Chair, JSPS Asian Core Program China-Japan Joint Symposium on Functional Supramolecular Architecture, Beijing, December 20-21 (2008)
- 2008, Organization Chair, SOKENDAI Asian Winter School "Molecular Sciences on Different Space-Time Scales", Okazaki, December 9-12 (2008)
- 2008, Organization Chair, JSPS Asian Core Program China-Japan Joint Symposium on the π -Conjugated Molecules towards Functional Materials, Beijing, February 24-25 (2008)
- 2006, Organization Chair, Winter School of JSPS Asian Core Program on Frontiers of Materials, Photo- and Theoretical Molecular Sciences, Beijing, December 5-8 (2006)

6. Invited Plenary Speaker, Symposium, Endowed, & Award Lectures

- Plenary Speaker, Science for Industry, Madrid, Spain, Jan 18-20, 2024
- Invited Speaker, Gordon Research Conference on Nanoporous Materials & Their Applications, NH, USA, August 6-11, 2023

- Keynote Speaker, The 11th Singapore International Conference on Chemistry, Singapore, December 11-14, 2022
- Invited Speaker, Summer School "Synthetic 2D Materials", Dresden, Germany. September 19-23, 2022
- Invited Speaker, Organic 2D Crystalline Materials: Chemistry, Physics and Devices (O2DMAT), Madrid, Spain, September 13-15, 2022
- Invited Speaker, The 3rd International Conference on Porous Organic Polymers (POPs-2021), Boulder, USA, August 28-September 1, 2022.
- Plenary Speaker, The 16th Conference of the Asian Crystallographic Association (AsCA 2019), Singapore, December 17-20, 2019.
- Plenary Speaker, The 1st International Symposium on Tropical Marine Resources Utilization and Green Chemical Engineering, Hainan University, December 14-15, 2019.
- Keynote Speaker, Materials Beyond VI, Fudan University, July 17-20, 2019.
- Keynote (Plenary) Speaker, The 6th International Conference on Metal-Organic Frameworks, Auckland, New Zealand, December 8-12, 2018.
- Plenary Speaker, The 15th National Conference on Liquid Crystal Polymers and Supramolecular Ordering Structures, Qingdao, August 7-10 (2018)
- Plenary Speaker, The 5th EOC Symposium, Nankai University, July 8-14, 2018.
- Keynote (Plenary) Speaker, Flatlands beyond Graphene, Leipzig, Germany, September 3-7, 2018.
- Plenary Speaker, The 2017 National Polymer Symposium of China, Chengdu, October 9-14, 2017.
- Keynote Speaker, Workshop on 2D Materials, Dresden, Germany, August 28-September 1, 2017.
- Award Lecture, The 97th Annual Meeting of Chemical Society of Japan, Keio University, Yokohama, Japan, March 16-19, 2017.
- Keynote Speaker, The 9th Singapore International Chemical Conference (SICC-9), Singapore, December 10-15, 2016.
- Plenary Speaker, The 24th Japan Polyimide & Aromatic Polymer Conference, Nomi, Japan, Dec 8, 2016.
- Invited Speaker, The 26th Conference of the Condensed Matter Division (CMD26); topical colloquium "Condensed Matter Science in Porous Frameworks", Groningen, The Netherlands, September 3-6, 2016.
- Plenary Speaker, POLYMAT's Spotlight, San Sebastian, Spain, June 21-24, 2016.
- Keynote Speaker, International Conference on Nanoscience and Nanotechnology (ICONN), Canberra, Australia, February 7-11, 2016.
- Invited Speaker, Pacifichem 2015, Honolulu, USA, December 15-20, 2015.

- Keynote (Plenary) Speaker, The 1st European Conference on Metal-Organic Frameworks and Porous Polymers, Potsdam, Germany October 11-14, 2015.
- Keynote Speaker, China NANO2015, Beijing, September 3-5, 2015.
- Invited Speaker, The 250th American Chemical Society National Meeting, Boston, August 16-20, 2015.
- Keynote Speaker, Commemorative Golden Jubilee Chemistry Conference, Singapore, August 6-8, 2015.
- Keynote Speaker, The 8th International Conference on Materials for Advanced Technologies (ICMAT2015), Singapore, June 28–July 3, 2015.
- Invited Speaker, The 13th International Conference on Polymer Advanced Technologies (PAT2015), Hangzhou, June 25-28, 2015.
- Keynote Speaker, The 2nd International Symposium on Aggregation-Induced Emission, Guangzhou, May 15-18, 2015.
- Keynote Speaker, The 7th International Symposium on Advanced Materials and Nanotechnology (AMN-7), Nelson, New Zealand, February 8-12, 2015.
- Keynote Speaker, China-Japan Joint Symposium on Supramolecular Architecture, Tianjin University, December 11-13, 2014.
- Keynote Speaker, IUPAC International Conference on Novel Materials and their Synthesis (NMS) & International Symposium on Fine Chemistry and Functional Polymers (FCFP), Zhenzhou, China, October 11-15, 2014.
- Keynote Speaker, The 2nd International Symposium on Polymer Ecomaterials (PEM2014), Kunming, August 22-16, 2014.
- Keynote Speaker, Symposium on Computational Materials for Catalysis and Photovoltaics, Suzhou, May 25-28, 2014.
- Invited Speaker, The 248th ACS National Meeting & Exposition, San Francisco, CA, USA, August 10-14, 2014.
- Invited Speaker, Sino-German Symposium on π -Conjugated Nanomaterials for Catalysis and Clean Energy Applications, Berlin, Germany, April 1-4, 2014.
- Keynote Speaker, The 6th China-Japan Joint Symposium on Functional Supramolecular Architecture, Suzhou, October 25-28, 2013.
- Keynote Speaker, The 9th IUPAC International Symposium on Novel Materials and Their Synthesis, Shanghai, October 17-22, 2013.
- Invited Speaker, The 246th ACS National Meeting, Indianapolis, USA, September 8-12, 2013.
- Invited Speaker, The 11th China-Japan Joint Symposium on Conduction and Photoconduction in Organic Solids and Related Phenomena, Changchun, September 1-4, 2013.
- Keynote Speaker, The 15th Asian Chemical Congress, Singapore, August 18-23, 2013.

- Invited Speaker, The International Symposium on Aggregation-Induced Emission, Wuhan, May 17-20, 2013.
- Keynote Speaker, The 2013 MOF young investigator symposium, Shanghai, May 12-14, 2013.
- Keynote Speaker, Japan-China Joint Symposium on Functional Supramolecular Architecture, Okazaki, Japan, January 19-21, 2013.
- Invited Speaker, The 244th ACS National Meeting, Philadelphia, USA, August 19-23, 2012.
- Invited Speaker, The 10th International Symposium on Functional π -Electron Systems (F- π -10), Beijing, October 13-17, 2011.
- Keynote Speaker, The China-Japan Joint Symposium on Functional Supramolecular Architecture, Beijing, October 6-10, 2011.
- Invited Speaker, The 2011 National Polymer Symposium of China, Dalian, September 24-28, 2011.
- Invited Speaker, The 2nd FAPS Polymer Congress (FAPS-PC2011), Beijing, May 8-12, 2011.
- Keynote Speaker, The Beijing-Guangzhou-Hong Kong Symposium on Polymer, Guangzhou, January 3-6, 2011.
- Keynote Speaker, The Xiangshan Science Conference on Functional Supramolecular Systems, Beijing, October 27-29, 2010.
- Keynote Speaker, The China-Japan Joint Symposium on Functional Supramolecular Architecture, Changchun, July 25-28, 2010.
- Invited Speaker, The 239th ACS National Meeting, San Francisco, USA, March 21-25, 2010.
- Keynote Speaker, The 3rd International Symposium on Creation of Functional Nanospace by Metal-Organic Frameworks, Kanagawa University, Japan, February 23, 2010.
- Keynote Speaker, The 5th IUPAC International Symposium on Novel Materials and Their Synthesis, Shanghai, October 18-24, 2009.
- Keynote Speaker, International Conference on Organic Photonics and Electronics 2009 (ICOPE2009), The 11th International Conference on Organic Nonlinear Optics (ICONO11), Beijing, September 20-25, 2009.
- Invited Speaker, 2009 National Polymer Symposium of China, Tianjin, August 18-22, 2009.
- Keynote Speaker, Japan-China Joint Symposium on Functional Supramolecular Architecture, Sapporo, Japan, August 2-5, 2009.
- Keynote Speaker, China-Japan Joint Symposium on Functional Supramolecular Architecture, Beijing, December 20-21, 2008.
- Keynote Speaker, The 2008 National Symposium on Solar Energy Photochemistry and Photocatalysis, Shanghai, November 2-4, 2008.
- Keynote Speaker, The Second CAS Symposium on Applied Chemistry, Changchun, September 23-25, 2008.

- Keynote Speaker, The 5th International Symposium on High-Tech Polymer Materials (HTPM-V), Beijing, October 27-29, 2008.
- Keynote Speaker, The 2008 Asian-Core Program Symposium and Annual Meeting, KAIST, Korea, March 6-9, 2008.
- Keynote Speaker, China-Japan Joint Symposium on the π -Conjugated Molecules towards Functional Materials, Beijing, February 24-25, 2008.
- Keynote Speaker, The 2008 Chinese Academy of Sciences International Symposium on Advanced Polymer Materials, Ningbo, April 5-9, 2008.
- Invited Speaker, The 9th China-Japan Joint Symposium on Conduction and Photoconduction in Organic Solids and Related Phenomena, Beijing, October 27-29, 2007.
- Invited Speaker, The 2007 National Polymer Symposium of China, Chengdu, October 9-13, 2007.
- Keynote Speaker, The 309th Xiangshan Science Conference on Soft Matter, Beijing, September 25-27, 2007.
- Award Lecture, The 55th Symposium on Macromolecules, The Japan Society of Polymer Science, Toyama University, Japan, September 20-22, 2006.
- Invited Speaker, International Symposium on Polymer Chemistry, Dalian, June 8-11, 2006.
- Invited Speaker, International Symposium on Polymer Physics, Suzhou, June 1-5, 2006.
- Keynote Speaker, The 4th East Asia Polymer Conference, Tianjin, March 28-31, 2006.
- Invited Speaker, The 14th POLYCHAR World Forum on Advanced Materials, Nara, Japan, April 17-21, 2006.

7. Invited Lectures, Colloquiums and Lectureships at Institutes and Universities

- Universidad Autónoma de Madrid
- University of Ludwig-Maximilians-Universität München
- Max Plank Institute for Polymer Research
- Technische Universität Dresden
- Catalan Institution for Research and Advanced Studies (ICREA) & Institute of Chemical Research of Catalonia (ICIQ), Spain
- Sandford University
- University of South Florida
- The University of Tokyo
- Osaka University
- Nagoya University
- Tokyo Institute of Technology
- Nara Advanced Institute of Technology
- Hokkaido University

- Kyushu University
- Tohoko University

8. Highlighted in Journals, Newspapers, and TV

- January 19, 2022, Highlighted by phys.org, “Water clusters in hydrophobic crystalline porous covalent organic frameworks”
- January 19, 2022, Highlighted by Flipboard; “Water clusters in hydrophobic crystalline porous covalent organic frameworks”
- November 19, 2021, Highlighted by Newsbreak “Water cluster in hydrophobic crystalline porous covalent organic frameworks”
- November 19, 2021, Highlighted by Nature Chemistry Community “Water Cluster in Hydrophobic Crystalline Porous Covalent Organic Frameworks”
- September 05, 2021, Highlighted by *ChemistryViews* “Covalent Organic Frameworks Light UP”
- July 06, 2021, Highlighted by AlphaGalileo “Tiny Tweaks to Sparkle: Editing Light-Emitting Organic Molecules Via Surface Modification”
- November 16, 2020, Interviewed by *Nat. Commun.* 11, 5336 (2020), “Donglin Jiang answers questions about 15 years of research on covalent organic frameworks” – Interviewed by Senior Editor Dr. Johannes Kreutzer of *Nature Communications*
- April 24, 2020, Selected as Very Important Paper of *Angew. Chem.*
- October 9, 2019, Highlighted by Phys. Org. “Photocatalytic hydrogen production from water”
- October 20, 2017, Highlighted by Kanazawa Television
- October 13, 2016, Highlighted by Natureaisa Website
- August 3, 2016, Highlighted by Nikkan Kogyo Shimbun
- July 28, 2016, Highlighted by Kokkoku News
- July 27, 2016, Highlighted by Press Release by JAIST
- May 11, 2016, Highlighted by Nikkan Kogyo Shimbun
- April 29, 2016, Highlighted by Kokkoku News
- April 29, 2016, Highlighted by The Science News
- April 28, 2016, Highlighted by Press Release by JAIST
- April 15, 2016, Highlighted by Kokkoku News
- April 5, 2016, Highlighted by Press Release by JAIST
- November 2015, Highlighted by *Synfacts* 11 1269 (2015), Persistent COF: A Stable Platform for Asymmetric Organocatalysis by T. M. Swage and L. Chen
- October 6, 2015, Highlighted by Phys. Org.
- September 28, 2015, Highlighted by Chemeurope.Com.
- September 25, 2015, Highlighted by EurekAlert&AAAS, Exploration of stable, crystalline, porous covalent organic frameworks

- September 25, 2015, Highlighted by press release by IMS
- September 22, 2015, Highlighted by *Chemistry World*, Firming COFs up takes Michael reaction catalysis forward by A. Exrance
- Jan 28, 2014, Highlighted by *Synfacts*
- January 2014, Highlighted by Nature Publishing Group Japanese Website
- December 9, 2013, Highlighted by Nikkan kogyo Shimbun
- December 6, 2013, Highlighted by The Science News
- December 2, 2013, Highlighted by Nanotech Japan
- November 15, 2013, Highlighted by Press Release by IMS
- Jan 28, 2013, Highlighted by Nikkan Kagaku Shimbun
- Jan 23, 2013, Highlighted by Press Release by IMS
- May 24, 2012, Highlighted by The Science News
- May 17, 2012, Highlighted by Nikkei Sangyo Shimbun
- May 14, 2012, Highlighted by Environmental business
- May 14, 2012, Highlighted by Nikkan Kagaku Shimbun
- May 11, 2012, Highlighted by Press Release by JST and IMS
- December 19, 2011, Highlighted by *ACS Noteworthy Chemistry*, Switch on Luminescence by Locking Molecular Rotors
- December 2, 2011, Highlighted by The Science News
- November 30, 2011, Highlighted by Nikkan Kagaku Shimbun
- November 28, 2011, Highlighted by Nanotech Japan
- November 24, 2011, Highlighted by Nikkei Sangyo Shimbun
- November 21, 2011, Highlighted by Nikkan Kagaku Shimbun
- November 17, 2011, Highlighted by Nekkei Bioonline
- November 16, 2011, Highlighted by Kagaku Kogyo Nippo
- November, Highlighted by Nature Publishing Group Japanese Website
- November 16, 2011, Highlighted by Press Release by IMS and JST
- September 20, 2011, Highlighted by DIME
- September 15, 2011, Highlighted by DWV-Mitteilungen
- September 12, 2011, Highlighted by *Chemical & Engineering News*, Volume 89 Issue 37 p. 21, Framework Compound Conducts Electrons by M. Jacoby
- September 6, 2011, Highlighted by *Nature Nanotechnology*, Porous Polymer Charged up by O. Vaughan
- September 1, 2011, Highlighted by SpectroscopyNOW
- August 23, 2011, Highlighted by Physorg.com
- August 22, 2011, Highlighted by Green Car Congress

- August 22, 2011, Highlighted by Nano Werk
- August 12, 2011, Selected as Very Important Paper of Angew. Chem.
- August 1, 2011, Highlighted by Nikkan kogyo Shimbun
- July 29, 2011, Highlighted by The Science News
- July 5, 2010, Highlighted by NPG Asia Materials Highlights
- June 28, 2010, Highlighted by ACS *Noteworthy Chemistry*
- June 7, 2010, Highlighted by The Science News
- May 22, 2010, Highlighted by Chunichi News
- October 13, 2008, Highlighted by *Chemical & Engineering News*, Covalent Conducting Belts by Jyllian N. Kemsley
- September 30, 2008, Selected as Very Important Paper of Angew. Chem.
- January 17, 2005, Highlighted by *Heart Cut*, ACS
- October 30, 2004. Highlighted by The Asahi Shimbun
- October 6, 2004, Highlighted by *Nature*, Research Highlights 431, 643. Photoelectrochemistry: Molecular Trees Split Water by A. Wright
- 2004, Highlighted by *Chemistry World* (RSC) 2004, Issue 3, March.
- February 25, 2003, Highlighted by Nikkei Sangyo Shimbun
- February 12, 2003, Highlighted by Nihon Keizai Shimbun
- January 8, 2003, Highlighted by Fuji Television.
- November 12, 2002, Highlighted by Nikkei Sangyo Shimbun
- 2000, Highlighted by *Photonics Spectra* 34, 48 (2020).
- December 13, 1999, Highlighted by *Chemical & Engineering News*, Dendritic Rod Emits Blue Light by M. Freemantle
- October 26, 1998, Highlighted by *Chemical & Engineering News* 1998, 43, 37. Mimicking Natural Photosynthesis by M. Freemantle
- July 13, 1998, Highlighted by Nippon Kogyo Shimbun
- October 20, 1997, Highlighted by *Chemical & Engineering News*. Trapping Photons in Macromolecular Trees, 1997, 42, 35.
- August 25, 1997, Highlighted by Nihon Keizai Shimbun
- July 31, 1997, Highlighted by *Nature News & Views*, Trees to Trap Photons, by S. Mukamel
- October 24, 1996, Highlighted by Nikkei Sangyo Shimbun
- August 1, 1996, Highlighted by Nippon Kogyo Shimbun

9. Publications

Field: *Covalent Organic Frameworks; Their Chemistry, Physics, Materials Science, and Applications*

Google Scholar Citations: 37,300+; H-index: 90

Average Citation per paper: 248

Monograph: 1 (Volume I & II); Book Chapters: 15; Patent: 9

Title to be announced

Ruoyang Liu[†], Yongzhi Chen[†], Hongde Yu, Miroslav Položij, Yuanyuan Guo, Tze Chien Sum, Thomas Heine, and Donglin Jiang*

Nature Catalysis **2024**, 7, XXX–XXX. DOI: 10.1038/s41929-023-01102-3

Crystalline, Porous Helicene Covalent Organic Frameworks

Qianqian Yan, Shanshan Tao, Ruoyang Liu, Yongfeng Zhi, and Donglin Jiang*

Angew. Chem., Int. Ed. **2024**, 63, e202316092. DOI: 10.1002/anie.202316092

Covalent Organic Frameworks: Reversible 3D Coalesce via Interlocked Skeleton–Pore Actions and Impacts on π Electronic Structures

Juan Li, Lili Liu, Xuan Tang, Xi Bai, Yukun Liu, Dongsheng Wang, Shanshan Tao, Ruoyang Liu, and Donglin Jiang*

J. Am. Chem. Soc. **2023**, 145, 26383–26392. DOI:10.1021/jacs.3c10280

Integrated Interfacial Design of Covalent Organic Framework Photocatalysts to Promote Hydrogen Evolution from Water

Ting He, Wenlong Zhen, Yongzhi Chen, Yuanyuan Guo, Zhuoer Li, Ning Huang, Zhongping Li, Ruoyang Liu, Yuan Liu, Xu Lian, Can Xue, Tze Chien Sum, Wei Chen, and Donglin Jiang*

Nature Communications **2023**, 14, 329. DOI: 10.1038/s41467-023-35999-y

Covalent Organic Frameworks

Ke Tian Tan, Fuxiang Wen, David Rodríguez-San-Miguel, Ning Huang, Felix Zamora, Xinliang Feng, Wei Wang, Arne Thomas, Donglin Jiang*

Nature Reviews Methods Primers, **2023**, 3, 1(Invited)

Exciton Diffusion and Annihilation in An sp^2 Carbon-Conjugated Covalent Organic Framework

Xinzi Zhang, Keyu Geng, Donglin Jiang*, and Gregory D. Scholes*

J. Am. Chem. Soc. **2022**, 144, 16423–16432. DOI:10.1021/jacs.2c04742

Bottom-up Interfacial Design of Covalent Organic Frameworks for Highly Efficient and Selective Electrocatalysis of CO₂

Ting He, Chenhuai Yang, Yongzhi Chen, Ning Huang, Shuming Duan, Zhicheng Zhang, Wenping Hu, and Donglin Jiang*

Adv. Mater. **2022**, 34, 2205186. DOI:10.1002/adma.202205186

Covalent Organic Frameworks: Chemistry of Pore Interface and Wall Surface Perturbation and Impact on Functions

Lejian Deng, Zhichao Ding, Xingyao Ye, and Donglin Jiang*

Acc. Mater. Res. **2022**, 3, 879–893. DOI:10.1021/accountsmr.2c00108 (Invited)

Module-Patterned Polymerization towards Crystalline sp^2 -Carbon Covalent Organic Frameworks

Enquan Jin, Keyu Geng, Shuai Fu, Matthew A. Addicoat, Wenhao Zheng, Shuailei Xie,

Qihong Jiang, Hai I. Wang,* and Donglin Jiang*
Angew. Chem., Int. Ed. **2022**, 61, e2021150. DOI:10.1002/anie.202115020

Water Cluster in Hydrophobic Crystalline Porous Covalent Organic Frameworks
 Ke Tian Tan, Shanshan Tao, Ning Huang, and Donglin Jiang*
Nat. Commun. **2021**, 12, 6747. DOI: <https://www.nature.com/articles/s41467-021-27128-4>
 Highlighted in <https://chemistrycommunity.nature.com/>

Exceptional Electron Conduction in Two-Dimensional Covalent Organic Frameworks
 Enquan Jin, Keyu Geng, Shuai Fu, Sheng Yang, Narissa Kanlayakan, Matthew A. Addicoat, Nawe Kungwan, Johannes Geurs, Hong Xu, Mischa Bonn, Hai I. Wang, Jurgen Smet, Tim Kowalczyk, and Donglin Jiang*
Chem **2021**, 7, 3309–3324. DOI:<https://doi.org/10.1016/j.chempr.2021.08.015>

Smart Covalent Organic Frameworks: Dual Channel Sensors for Acid and Base
 Jia Xin Koh, Keyu Geng, and Donglin Jiang*
Chem. Commun. **2021**, 57, 9418–9421. DOI: 10.1039/D1CC03057D

Editing Light Emission with Stable Crystalline Covalent Organic Frameworks via Wall Surface Perturbation
 Zhongping Li, Keyu Geng, Ting He, Ke Tian Tan, Ning Huang, Qihong Jiang, Yuki Nagao, and Donglin Jiang*
Angew. Chem., Int. Ed. **2021**, 60, 19419–19427.
 Selected as Very Important Paper; DOI:10.1002/anie.202107179
 Highlighted by AlphaGalileo “Tiny Tweaks to Sparkle: Editing Light-Emitting Organic Molecules Via Surface Modification” (July 06, 2021)
 Highlighted by Chemistry Views “Covalent Organic Frameworks Light UP”(September 05, 2021).

Hydroxide Anion Transport in Covalent Organic Frameworks
 Shanshan Tao, Hong Xu, Qing Xu, Yuh Hijikata, Qihong Jiang, Stephan Irle, and Donglin Jiang*
J. Am. Chem. Soc. **2021**, 143, 8970–8975. DOI:10.1021/jacs.1c03268

All sp² Carbon Covalent Organic Frameworks
 Ting He, Keyu Geng, and Donglin Jiang*
Trends in Chemistry **2021**, 3, 431–444. DOI: 10.1016/j.trechm.2021.03.008 (Invited Review)

Ultrafast and Stable Proton Conduction in Polybenzimidazole Covalent Organic Frameworks via Confinement and Activation
 Juan Li, Jing Wang, Zhenzhen Wu, Shanshan Tao, and Donglin Jiang*
Angew. Chem., Int. Ed. **2021**, 60, 12918–12923. DOI: 10.1002/anie.202101400

Covalent Organic Frameworks: A Molecular Platform for Designer Polymeric Architectures and Functional Materials
 Donglin Jiang*

The Bulletin of Chemical Society of Japan, **2021**, 94, 1215–1231 (Award Account)
(Inside front cover) DOI:10.1246/bcsj.20200389

Polymorphism of 2D Imine Covalent Organic Frameworks

Yusen Li, Linshuo Guo, Yongkang Lv, Ziqiang Zhao, Yanhang Ma, Weihua Chen, Guolong Xing, Donglin Jiang, and Long Chen*

Angew. Chem., Int. Ed. **2021**, 60, 5363–5369. DOI: 10.1002/anie.202015130

Covalent Organic Frameworks: An Ideal Platform for Designing Ordered Materials and Advanced Applications

Ruoyang Liu, Ke Tian Tan, Yifan Gong, Yongzhi Chen, Zhuoer Li, Shuailei Xie, Ting He, Zhen Lu, Hao Yang, and Donglin Jiang*

Chem. Soc. Rev. **2021**, 50, 120–242. DOI: 10.1039/d0cs00620c.

(Selected as Inside Cover Page)

Covalent Organic Frameworks for Energy Conversions: Current Status, Challenges, and Perspectives

Shanshan Tao, and Donglin Jiang*

CCS Chem. **2021**, 3, 2003–2024. DOI: 10.31635/ccschem.020.202000491

2,4,6-Triphenyl-1,3,5-Triazine Based Covalent Organic Frameworks for Photoelectrochemical H₂ Evolution

Chunhui Dai, Ting He, Lixiang Zhong, Xingang Liu, Wenlong Zhen, Can Xue, Shuzhou Li, Donglin Jiang,* and Bin Liu*

Adv. Mater. Inter. **2021**, 8, 2002191. DOI: 10.1002/admi.202002191

Covalent Organic Frameworks: An Amazing Chemistry Platform for Designing Polymers
Donglin Jiang*

Chem **2020**, 6, 2461–2483. DOI: 10.1016/j.chempr.2020.08.024

Covalent Organic Frameworks: Pore Design and Interface Engineering

Zhuo Li, Ting He, Yifan Gong, and Donglin Jiang*

Acc. Chem. Res. **2020**, 53, 1672–1685. DOI: 10.1021/acs.accounts.0c00386x

Covalent Organic Frameworks: Polymer Chemistry and Functional Design

Keyu Geng, Vasanthakumar Arumugam, Huanjun Xu, Yanan Gao, and Donglin Jiang*

Prog. Poly. Sci. **2020**, 108, 101288. DOI: 10.1016/j.progpolymsci.2020.101288

A Stable and Conductive Metallophthalocyanine Framework for Electrocatalytic Carbon Dioxide Reduction in Water

Ning Huang, Ka Hung Lee, Yan Yue, Xiaoyi Xu, Stefan Irle, Qihong Jiang, and Donglin Jiang*

Angew. Chem., Int. Ed. **2020**, 59, 16587–16593. DOI: 10.1002/anie.202005274

Topology-Templated Synthesis of Crystalline Porous Covalent Organic Frameworks

Enquan Jin, Keyu Gen, Ka Hung Lee, Weiming Jiang, Juan Li, Stephan Irle, Qihong Jiang,

and Donglin Jiang*

Angew. Chem., Int. Ed. **2020**, 59, 12162–12169. DOI: 10.1002/anie.202004278 (Very Important Paper)

Covalent Organic Frameworks for Heterogeneous Catalysis: Principle, Current Status, and Challenges

Jia Guo, and Donglin Jiang*

ACS Central Science **2020**, 6, 869–879 (Invited Outlook). DOI: 10.1021/acscentsci.0c00463

New Synthetic Strategies Towards Covalent Organic Frameworks

Yusen Li, Weiben Chen, Guolong Xing, Donglin Jiang, and Long Chen*

Chem. Soc. Rev. **2020**, 49, 2852–2868. DOI: 10.1039/D0CS00199F

Bromine-Functionalized Covalent Organic Frameworks for Efficient Triboelectric Nanogenerator

Lipeng Zhai, Siwen Cui, Boli Tong, Weihua Chen, Zijie Wu, Constantinos Soutis, Donglin Jiang,* Guangshan Zhu,* and Liwei Mi*

Chem. Eur. J. **2020**, 26, 5784–5788. DOI: 10.1002/chem.202000722

Confining H₃PO₄ Network in Covalent Organic Frameworks Enables Proton Super Flow

Shanshan Tao, Lipeng Zhai, A. D. Dinga Wonanke, Matthew A. Addicoat, Qihong Jiang, and Donglin Jiang*

Nat. Commun. **2020**, 11, 1981. DOI:10.1038/s41467-020-15918-1

Covalent Organic Frameworks: Design, Synthesis, and Functions

Keyu Geng, Ting He, Ruoyang Liu, Sasanka Dalapati, Ke Tian Tan, Zhongping Li, Shanshan Tao, Yifan Gong, Qihong Jiang, and Donglin Jiang*

Chem. Rev. **2020**, 120, 8814–8933. DOI: 10.1021/acs.chemrev.9b00550

Covalent Organic Frameworks: Chemical Approaches to Designer Structures and Built-in Functions

Xinyi Chen, Keyu Geng, Ruoyang Liu, Ke Tian Tan, Yifan Gong, Zhongping Li, Shanshan Tao, Qihong Jiang, and Donglin Jiang*

Angew. Chem., Int. Ed. **2020**, 59, 5050–5091. DOI: 10.1002/anie.201904291

Designing Covalent Organic Frameworks with Tailored Ionic Interface for Ion Transportation across One-Dimensional Channels

Qing Xu, Shanshan Tao, Qihong Jiang, and Donglin Jiang*

Angew. Chem., Int. Ed. **2020**, 59, 4557–4563. DOI: 10.1002/anie.201915234

Synthesis of Two-Dimensional Covalent Organic Frameworks in Ionic Liquids

Yanan Gao, Chang Wang, Hui Hu, Rile Ge, Meihua Lu, Jianqiang Zhang, Zhongping Li, Pengpeng Shao, and Donglin Jiang*

Chem. Eur. J. **2019**, 58, 15488–15492. DOI: 10.1002/chem.201904088

High Precision Size Recognition and Separation in Synthetic 1D Nanochannels

Ping Wang, Xinyi Chen, QiuHong Jiang, Matthew Addicoat, Ning Huang, Sasanka Dalapati, Thomas Heine, Fengwei Huo, and Donglin Jiang*

Angew. Chem., Int. Ed. **2019**, 58, 15922–15927. DOI: 10.1002/anie.201909851

Engineering Covalent Organic Frameworks for Light-Driven Hydrogen Production from Water

Ting He, Keyu Geng, and Donglin Jiang*

ACS. Mater. Lett. **2019**, 1, 203–208. DOI: 10.1021/acsmaterialslett.9b00153

Energy-Storage Covalent Organic Frameworks: Improving Performance via Engineering Polysulfide Chains on Walls

Fei Xu, Shuhao Yang, Xiong Chen, Qianhui Liu, Hejun Li, Hongqiang Wang, Bingqing Wei, and Donglin Jiang*

Chem. Sci. **2019**, 5, 6001–6006. DOI: 10.1039/C8SC04518F

2D sp² Carbon-Conjugated Covalent Organic Frameworks for Photocatalytic Hydrogen Production from Water

Enquan Jin, Zhian Lan, QiuHong Jiang, Keyu Geng, Guosheng Li, Xinchun Wang, and Donglin Jiang*

Chem **2019**, 5, 1632–1647. DOI: 10.1016/j.chempr.2019.04.015

Highlighted by Phys. Org. October 9, 2019.

Iodine Capture in Porous Organic Polymers and Metal-Organic Frameworks materials

Wei Xie, Shu-Ran Zhang, Yan-Hong Xu,* and Donglin Jiang*

Mater. Horizons **2019**, 6, 1571–1595. DOI: 10.1039/c8mh01656a

Designed Synthesis of Stable Light-Emitting Two-Dimensional sp² Carbon-Conjugated Covalent Organic Frameworks

Enquan Jin, Juan Li, Keyu Geng, QiuHong Jiang, Hong Xu, Qing Xu, and Donglin Jiang*

Nat. Commun. **2018**, 9, 4143. DOI: 10.1038/s41467-018-06719-8

Highlighted by Nature chemistry community

[https://chemistrycommunity.nature.com/users/177332-jiang-donglin/posts/39712-designed-synthesis-of-stable-light-emitting-two-dimensional-sp²-carbon-conjugated-covalent-organic-frameworks](https://chemistrycommunity.nature.com/users/177332-jiang-donglin/posts/39712-designed-synthesis-of-stable-light-emitting-two-dimensional-sp2-carbon-conjugated-covalent-organic-frameworks)

Light-Emitting Covalent Organic Frameworks: Fluorescence Improving via Pinpoint Surgery and Selective Switch-On Sensing of Anions

Zhongping Li, Ning Huang, Ka Hung Lee, Yu Feng, Shanshan Tao, QiuHong Jiang, Yuki Nagao, Stephan Irle, and Donglin Jiang*

J. Am. Chem. Soc. **2018**, 140, 12374–12373. DOI: 10.1021/jacs.8b08380

Ion Conduction in Polyelectrolyte Covalent Organic Frameworks

Qing Xu, Shanshan Tao, QiuHong Jiang, and Donglin Jiang*

J. Am. Chem. Soc. **2018**, 140, 7429–7432. DOI: 10.1021/jacs.8b03814

Exceptional Iodine Capture in 2D Covalent Organic Frameworks

Ping Wang, Qing Xu, Zhongping Li, Weiming Jiang, Qiuhong Jiang, and Donglin Jiang*
Adv. Mater. **2018**, 30, 1801991. DOI: 10.1002/adma.201801991

A 2D Conductive Organic-Inorganic Hybrid with Extraordinary Volumetric Capacitance at Minimal Swelling

Kefeng Xiao, Donglin Jiang, Rose Amal, and Da-Wei Wang*
Adv. Mater. **2018**, 30, 1800400. DOI: 10.1002/adma.201800400

Template Conversion of Covalent Organic Frameworks into 2D Conducting Nanocarbons for Catalyzing Oxygen Reduction Reaction

Qing Xu, Yanpin Tan, Xiaobin Zhang, Yoshifumi Oshima, Qiuhong Chen, and Donglin Jiang*
Adv. Mater. **2018**, 30, 1706330. DOI: 10.1002/adma.201706330

A 3D Covalent Organic Framework with Exceptionally High Iodine Capture Capability

Chang Wang, Yu Wang, Rile Ge, Xuedan Song, Xueqing Xing, Qike Jiang, Hui Lu, Ce Hao, Xinwen Guo, Yanan Gao*, and Donglin Jiang*
Chem. Eur. J. **2018**, 24, 585–589. DOI: 10.1002/chem.201705405

Layered Conductive Polymer-Inorganic Anion Network for High-Performance Ultra-Loading Capacitive Electrodes

Kefeng Xiao, Jian Pan, Kang Liang, Haijun Su, Donglin Jiang, Rose Amal, and Da-Wei Wang*
Energy Storage Mater. **2018**, 14, 90–99. DOI: 10.1016/j.ensm.2018.02.018

Long-Chain Solid Organic Polysulfide Cathode for High-Capacity Secondary Lithium Batteries

Qingcong Zeng, Yang Li, Kuang-Hsu Wu, Ning Huang, Sasanka Dalapati, Bing-Jian Su, Lin-Yun Jang, Ian R. Gentle, Donglin Jiang, and Da-Wei Wang*
Energy Storage Mater. **2018**, 12, 30–36. DOI: 10.1016/j.ensm.2017.11.007

Systematic Engineering of Single Substitution in Zirconium Metal-Organic Frameworks toward High-Performance Catalysis

Ning Huang, Shuai Yuan, Hannah Drake, Xinyu Yang, Jiandong Pang, Junsheng Qin, Jialuo Li, Yingmu Zhang, Qi Wang, Donglin Jiang, and Hong-Cai Zhou*
J. Am. Chem. Soc. **2017**, 139, 18590–18597 (Cover) DOI: 10.1021/jacs.7b09553

Pyrolysis of Covalent Organic Frameworks: A General Strategy for Template Converting Conventional Skeletons into Conducting Microporous Carbons for High-performance Energy Storage.

Qing Xu, Yanpin Tan, Lipeng Zhai, Qiuhong Chen, and Donglin Jiang*
Chem. Commun. **2017**, 53, 11690–11693 DOI: 10.1039/C7CC07002K

Bicarbazole-based Redox-active Covalent Organic Frameworks for Ultrahigh-Performance Energy Storage

Shi Feng, Hogn XU, Chong Zhang, Yu Chen, Jinghui Zeng, Donglin Jiang*, and Jia-Xing

Jiang*

Chem. Commun. **2017**, 53, 11334–11337 DOI: 10.1039/C7CC07024A

Two-Dimensional sp² Carbon-Conjugated Covalent Organic Frameworks

Enquan Jin, Mizue Asada, Qing Xu, Sasanka Dalapati, Matthew A. Addicoat, Michael A. Brady, Hong Xu, Toshikazu Nakamura, Thomas Heine, Qihong Chen, and Donglin Jiang*
Science **2017**, 357, 673–676. DOI: 10.1126/science.aan0202

A Backbone Design Principle for Covalent Organic Frameworks: The Impact of Weakly Interacting Units on CO₂ Adsorption

Lipeng Zhai, Ning Huang, Hong Xu, Qihong Chen, and Donglin Jiang*
Chem. Commun. **2017**, 53, 4242–4245. DOI: 10.1039/C7CC01921A

Ionic Covalent Organic Frameworks: Design of a Charged Interface Aligned on 1D Channel Walls and Its Unusual Electrostatic Functions

Ning Huang, Ping Wang, Matthew A. Addicoat, Thomas Heine, and Donglin Jiang*
Angew. Chem., Int. Ed. **2017**, 56, 4982–4986. DOI: 10.1002/anie.201611542

Stable Covalent Organic Frameworks for Exceptional Mercury Removal from Aqueous Solutions

Ning Huang, Lipeng Zhai, Hong Xu, and Donglin Jiang*
J. Am. Chem. Soc. **2017**, 139, 2428–2434. DOI: 10.1021/jacs.6b12328

Luminescent Porous Polymers based on Aggregation-Induced Mechanism: Design, Synthesis and Functions

Sasanka Dalapati, Cheng Gu, and Donglin Jiang*
Small **2016**, 12, 6513–6527. DOI: 10.1002/smll.201602427

Covalent Organic Frameworks: A Materials Platform for Structural and Functional Designs

Ning Huang, Ping Wang, and Donglin Jiang*
Nat. Rev. Mater. **2016**, 1, 16068. DOI: 10.1038/natrevmats.2016.68

Charge Up in Wired Covalent Organic Frameworks

Qing Xu, Sasanka Dalapati, Donglin Jiang*
ACS Central Science **2016**, 12, 586–587.
DOI: 10.1021/acscentsci.6b00264

Multiple-Component Covalent Organic Frameworks

Ning Huang, Lipeng Zhai, Damien E. Coupry, Matthew A. Addicoat, Keiko Okushita, Katsuyuki Nishimura, Thomas Heine, and Donglin Jiang*
Nat. Commun. **2016**, 7, 12325. DOI: 10.1038/ncomms12325

Highly Emissive Covalent Organic Frameworks

Sasanka Dalapati, Enquan Jin, Matthew Addicoat, Thomas Heine, and Donglin Jiang*
J. Am. Chem. Soc. **2016**, 138, 5797–5800. DOI: 10.1021/jacs.6b02700

Two-Dimensional Artificial Light-Harvesting Antennae with Predesigned High-Order Structure and Robust Photosensitising Activity

Xiao Feng, Xuesong Ding, Long Chen, Yang Wu, Lili Liu, Matthew Addicoat, Stephan Irle, Yuping Dong, and Donglin Jiang*
Scientific Reports **2016**, 6, 32944. DOI: 10.1038/srep32944

Proton Conductions in Crystalline and Porous Covalent Organic Frameworks

Hong Xu, Shanshan Tao, and Donglin Jiang*
Nat. Mater. **2016**, 15, 722–727. DOI: 10.1038/NMAT4461

Porous Organic Polymers with Tunable Work Functions and Selective Hole and Electron Conductions for Energy Conversions

Cheng Gu, Ning Huang, Youchun Chen, Huanhuan Zhang, Shitong Zhang, Fenghong Li, Yuguang Ma, and Donglin Jiang*
Angew. Chem., Int. Ed. **2016**, 55, 3049–3053. DOI: 10.1002/anie.201510723

Covalent Organic Frameworks with Spatially Confined Guest Molecules in Nanochannels and Their Impacts on Crystalline Structures

Jia Gao, and Donglin Jiang*
Chem. Commun. **2016**, 52, 1498–1500. DOI: 10.1039/C5CC09225F

Theoretical Analysis of Structural Diversity of Covalent Organic Frameworks: Stacking Isomer Structures

Taku Hayashi, Yuh Hijikata, Alister Page, Donglin Jiang, and Stephan Irle*
Chem. Phys. Lett. **2016**, 664, 101–107. DOI: 10.1016/j.cplett.2016.09.071

Functional Conjugated Porous Polymer Materials

Zhen Xie, Yu-sen Li, Long Chen,* and Donglin Jiang*
Acta Polymeric Sinica **2016**, 1621–1634. DOI: 10.11777/j.j.issn1000-3304.2016.16222

 π -Conjugated Microporous Polymer Films: Designed Synthesis, Conducting Properties and Photoenergy Conversions

Cheng Gu, Ning Huang, Youchun Chen, Leiqiang Qin, Hong Xu, Shitong Zhang, Fenghong Li, Yuguang Ma, and Donglin Jiang*
Angew. Chem., Int. Ed. **2015**, 54, 13594–13598. (Selected as Hot Paper) DOI: 10.1002/anie.201506570

Designed Synthesis of Double-Stage Two-Dimensional Covalent Organic Frameworks

Xiong Chen, Matthew Addicoat, Enquan Jin, Hong Xu, Taku Hayashi, Fei Xu, Ning Huang, Stephan Irle, and Donglin Jiang*
Scientific Reports **2015**, 5, 14650. DOI: 10.1038/srep.14650

Stable, Crystalline, Porous, Covalent Organic Frameworks as A Platform for Chiral Organocatalysts

Hong Xu, Jia Gao, and Donglin Jiang*

Nat. Chem. **2015**, 7, 905–912. DOI: 10.1038/NCHEM2352

Highlighted by EurekAlert&AAAS "Exploration of stable, crystalline, porous covalent organic frameworks"; Chemistry World "Firming COFs up takes Michael reaction catalysis forward", by Andy Extance, and Synfacts, 2015, 11, 1269 "Persistent COF: A Stable Platform for Asymmetric Organocatalysis" by Timothy M. Swage, Lily Chen

Rational Design of Crystalline Supermicroporous Covalent Organic Frameworks with Triangular Topologies

Sasanka Dalapati, Matthew Addicoat, Shangbin Jin, Tsuneaki Sakurai, Jia Gao, Hong Xu, Stephan Irle, Shu Seki, and Donglin Jiang*

Nat. Commun. **2015**, 6, 7786. DOI: 10.1038/ncomms8786.

Designed Synthesis of Porphyrin-Based Two-Dimensional Covalent Organic Frameworks with Highly Ordered Structures

Xiong Chen, Jia Gao, and Donglin Jiang*

Chem. Lett. **2015**, 44, 1257–1259. DOI:10.1246/cl.150496

Creation of Superheterojunction Polymers via Direct Polycondensation: Segregated and Bicontinuous Donor-Acceptor π -Columnar Arrays in Covalent Organic Frameworks for Long-Lived Charge Separation

Shangbin Jin, Mustafa Supur, Matthew Addicoat, Ko Furukawa, Long Chen, Toshikazu Nakamura, Shunichi Fukuzumi,* Stephan Irle,* and Donglin Jiang*

J. Am. Chem. Soc. **2015**, 137, 7817–7828. DOI: 10.1021/ja5b03553

Tailor-Made Pore Surface Engineering in Covalent Organic Frameworks: Systematic Functionalization for Performance Screening

Ning Huang, Rajamani Krishna, and Donglin Jiang*

J. Am. Chem. Soc. **2015**, 137, 7079–7082. DOI: 10.1021/ja5b04300

A Photoresponsive Smart Covalent Organic Framework

Ning Huang, Xuesong Ding, Jangbae Kim, Hyotcherl Ihee, and Donglin Jiang*

Angew. Chem., Int. Ed. **2015**, 54, 8704–8707. (Selected as Very Important Paper) DOI: 10.1002/anie.201503902

π -Electronic Covalent Organic Framework Catalyst: π -Walls as Catalytic Beds for Diels-Alder Reactions Under Ambient Conditions

Yang Wu, Jia Gao, and Donglin Jiang*

Chem. Commun. **2015**, 51, 10096–10098. (Front Cover). DOI: 10.1039/C5CC03457D

Radical Covalent Organic Frameworks: A General Strategy to Immobilize Open-Accessible Polyradicals and High-Performance Capacitive Energy Storage

Fei Xu, Hong Xu, Xiong Chen, Dingcai Wu, Yang Wu, Hao Liu, Cheng Gu, Ruowen Fu, and

Donglin Jiang*

Angew. Chem., Int. Ed. **2015**, 54, 6814–1818. DOI: 10.1002/anie.201501706

Locking Covalent Organic Frameworks with Hydrogen Bonds: General and Remarkable Effects on Crystalline Structure, Physical Properties, and Photochemical Activities

Xiong Chen, Matthew Addicoat, Enquan Jin, Lipeng Zhai, Hong Xu, Ning Huang, Zhaoqi Guo, Lili Liu, Stephan Irle, and Donglin Jiang*

J. Am. Chem. Soc. **2015**, 137, 3241–3247. DOI: 10.1021/ja509602c

Cascade Exciton-Pumping Engines with Manipulated Speed and Efficiency in Light-Harvesting Porous π -Network Films

Cheng Gu, Ning Huang, Fei Xu, Jia Gao, and Donglin Jiang*

Scientific Reports **2015**, 5, 8867 (2015). DOI:10.1038/srep08867

Electrochemically Active, Crystalline, Mesoporous Covalent Organic Frameworks on Carbon Nanotubes for Synergistic Lithium Battery Energy Storage

Fei Xu, Shangbin Jin, Hui Zhong, Dingcai Wu, Xiaoqing Yang, Xiong Chen, Hao Wei, Ruowen Fu, and Donglin Jiang*

Scientific Reports **2015**, 5, 8225. DOI:10.1038/srep08225

Two-Dimensional Covalent Organic Frameworks for Carbon Dioxide Capture via Channel-Wall Functionalization

Ning Huang, Xiong Chen, Rajamani Krishna, and Donglin Jiang*

Angew. Chem., Int. Ed. **2015**, 54, 29860–2990. DOI: 10.1002/anie.201411262

High-Performance Heterogeneous Catalysis with Surface-Exposed Stable Metal Nanoparticles

Ning Huang, Yanhong Xu and Donglin Jiang*

Scientific Reports **2014**, 4, 7228. DOI:10.1038/srep07228

Photoelectric Covalent Organic Frameworks: Converting Open Lattices into Ordered Donor-Acceptor Heterojunctions

Long Chen, Ko Furukawa, Jia Gao, Atsushi Nagai, Toshikazu Nakamura, Yuping Dong, and Donglin Jiang*

J. Am. Chem. Soc. **2014**, 136, 9806–9808. DOI: 10.1021/ja502692w

Covalent Organic Frameworks: Crossing the Channel

Hong Xu and Donglin Jiang*

Nat. Chem. **2014**, 6, 564–566. DOI: 10.1038/nchem.1984

Controlled Synthesis of Conjugated Microporous Polymer Films: Versatile Platforms for Highly Sensitive and Label-Free Chemo- and Bio-Sensings

Cheng Gu, Ning Huang, Jia Gao, Fei Xu, Yanhong Xu, and Donglin Jiang*

Angew. Chem., Int. Ed. **2014**, 53, 4850–4855. DOI: 10.1002/anie.201402141

Towards Covalent Organic Frameworks with Predesignable and Aligned Open Docking Sites

Xiong Chen, Ning Huang, Jia Gao, Hong Xu, Fei Xu, and Donglin Jiang*
Chem. Commun. **2014**, 50, 6161–6163. DOI: 10.1039/C4CC01825G

Two-Dimensional Tetrathiafulvalene Covalent Organic Frameworks: Towards Latticed Conductive Organic Salts

Shangbin Jin, Tsuneaki Sakurai, Tim Kowalczyk, Sasanka Dalapati, Fei Xu, Hao Wei, Xiong Chen, Jia Gao, Shu Seki, Stephan Irle, and Donglin Jiang*
Chem. Eur. J. **2014**, 20, 14608–14612 (Back Cover) DOI: 10.1002/chem.201402844

Redox-Active Conjugated Microporous Polymers: A New Organic Platform for Highly Efficient Energy Storage

Fei Xu, Xiong Chen, Zhiwei Tang, Dingcai Wu, Ruowen Fu, and Donglin Jiang*
Chem. Commun. **2014**, 50, 4788–4790. (Inside Front Cover) DOI:10.1039/C4CC01002G

Structural Insights into the Functional Origin of Conjugated Microporous Polymers: Geometry-management of Porosity and Electronic Properties

Yanhong Xu, and Donglin Jiang*
Chem. Commun. **2014**, 50, 2781–2783. DOI: 10.1039/C3CC49669D

Catalytic Covalent Organic Frameworks via Pore Surface Engineering

Hong Xu, Xiong Chen, Jia Gao, Jianbin Lin, Matthew Addicoat, Stephan Irle, and Donglin Jiang*
Chem. Commun. **2014**, 50, 1292–1294. (Back Cover) DOI: 10.1039/C3CC48813F

An Azine-Linked Covalent Organic Framework

Sasanka Dalapati, Shangbin Jin, Jiao Gao, Yanhong Xu, Atsushi Nagai, and Donglin Jiang*
J. Am. Chem. Soc. **2013**, 135, 17310–17313. DOI: 10.1021/ja4103293

Conjugated Organic Framework with Three-Dimensionally Ordered Stable Polymer with Delocalized π Clouds

Jia Guo, Yanhong Xu, Shangbin Jin, Long Chen, Toshihiko Kaji, Yoshihito Honsho, Matthew A. Addicoat, Jangbae Ki, Akinori Saeki, Hyotcherl Ihee, Shu Seki, Stephan Irle, Masahiro Hiramoto, Jia Gao, and Donglin Jiang*
Nat. Commun. **2013**, 4, 2736. DOI: 10.1038/ncomms3736

Large Pore Donor–Acceptor Covalent Organic Frameworks

Shangbin Jin, Ko Furukawa, Matthew Addicoat, Long Chen, Seiya Takahashi, Stephan Irle, Toshikazu Nakamura, and Donglin Jiang*
Chem. Sci. **2013**, 4, 4505–4511. DOI: 10.1039/C3SC52034J

Control Crystallinity and Porosity of Covalent Organic Frameworks through Managing Interlayer Interactions Based on Self-Complementary π -Electronic Force

Xiong Chen, Matthew Addicoat, Stephan Irle, Atsushi Nagai, and Donglin Jiang*
J. Am. Chem. Soc. **2013**, 135, 546–549. DOI: 10.1021/ja3100319

A Squaraine-Linked Covalent Organic Framework

Atsushi Nagai, Xiong Chen, Xiao Feng, Xuesong Ding, Zhaoqi Guo, and Donglin Jiang*
Angew. Chem., Int. Ed. **2013**, 52, 3770–3774. (Hot Paper). DOI: 10.1002/anie.201300256

Charge Dynamics in a Donor–Acceptor Covalent Organic Framework with Periodically Ordered Bicontinuous Heterojunctions

Shangbin Jin, Xuesong Ding, Xiao Feng, Mustafa Supur, Ko Furukawa, Seiya Takahashi, Matthew Addicoat, Mohamed E. El-Khouly, Toshikazu Nakamura, Stephan Irle, Shunichi Fukuzumi, Atsushi Nagai, and Donglin Jiang*
Angew. Chem., Int. Ed. **2013**, 52, 2017–2021. (Inside Cover). DOI: 10.1002/anie.201209513

Conjugated Microporous Polymers: Design, Synthesis and Application

Yanhong Xu, Shangbin Jin, Hong Xu, Atsushi Nagai, and Donglin Jiang*
Chem. Soc. Rev. **2013**, 42, 8012–8031. (Front Cover Page) DOI: 10.1039/C3CS60160A

Star-Shaped Two-Dimensional Covalent Organic Frameworks

Xiao Feng, Yuping Dong, and Donglin Jiang*
CrystEngComm **2013**, 15, 1508–1511. (Invited paper for a Themed Issue for COFs). DOI: 10.1039/C2CE26371H

Super Absorbent Conjugated Microporous Polymers: A Synergistic Structural Effect on Exceptional Uptake of Amines

Xiaoming Liu, Yanhong Xu, Zhaoqi Guo, Atsushi Nagai, and Donglin Jiang*
Chem. Commun. **2013**, 49, 3233–3235. DOI: 10.1039/C3CC41082J

Core-Shell Conjugated Microporous Polymers: A New Strategy for Exploring Color-Tunable and -Controllable Light Emissions

Yanhong Xu, Atsushi Nagai, and Donglin Jiang*
Chem. Commun. **2013**, 49, 1591–1593 (Inside Cover). DOI: 10.1039/C2CC38211C

High-Rate Charge Carrier Transport in Porphyrin Covalent Organic Frameworks: Switching from Hole to Electron, and to Ambipolar

Xiao Feng, Lili Liu, Yoshihito Honsho, Akinori Saeki, Shu Seki, Stephan Irle, Yuping Dong, Atsushi Nagai, and Donglin Jiang*
Angew. Chem., Int. Ed. **2012**, 51, 2618–2622. DOI: 10.1002/anie.201106203

An Ambipolar Covalent Organic Framework with Self-Sorted and Periodic Electron Donor–Acceptor Ordering

Xiao Feng, Long Chen, Yoshihito Honsho, Oraphan Saengsawang, Lili Liu, Lu Wang, Akinori Saeki, Stephan Irle, Shu Seki, Yuping Dong, and Donglin Jiang*
Adv. Mater. **2012**, 24, 3026–3031. DOI: 10.1002/adma.201201185

Covalent Organic Frameworks

Xiao Feng, Xuesong Ding, and Donglin Jiang*
Chem. Soc. Rev. **2012**, 41, 6010–6022. DOI: 10.1039/C2CS35157A

Conducting Metallophthalocyanine 2D Covalent Organic Frameworks: The Role of Central Metals in Controlling π -Electronic Functions

Xuesong Ding, Xiao Feng, Akinori Saeki, Shu Seki, Atsushi Nagai, and Donglin Jiang*
Chem. Commun. **2012**, 48, 8952–8954. DOI:10.1039/C2CC33929C

Conjugated Microporous Polymers as Molecular Sensing Devices: Microporous Architecture Enables Rapid Response and Enhances Sensitivity in Fluorescence-On and Fluorescence-Off Sensing

Xiaoming Liu, Yanhong Xu, and Donglin Jiang*
J. Am. Chem. Soc. **2012**, 134, 8738–8742. DOI: 10.1021/ja303448r

Pore Surface Engineering in Covalent Organic Frameworks

Atsushi Nagai, Zhaoqi Guo, Xiao Feng, Shangbin Jin, Xiong Chen, Xuesong Ding, and Donglin Jiang*
Nat. Commun. **2011**, 2, 536. doi: 10.1038/ncomms1542 (2011). DOI: 10.1038/ncomms1542

Light-Emitting Conjugated Polymers with Microporous Network Architecture: Interweaving Scaffold Promotes Electronic Conjugation, Facilitates Exciton Migration, and Improves Luminescence

Yanhong Xu, Long Chen, Zhaoqi Guo, Atsushi Nagai, and Donglin Jiang*
J. Am. Chem. Soc. **2011**, 133, 17622–17625. DOI: 10.1021/ja208284t
Highlighted by ACS Noteworthy Chemistry, December 19, 2011 "Switch on Luminescence by Locking Molecular Rotors"

An n-Channel Two-Dimensional Covalent Organic Framework

Xuesong Ding, Long Chen, Yoshihito Honsho, Xiao Feng, Orapan Saengsawang, Jingdong Guo, Akinori Saeki, Shu Seki, Stefan Irle, Shigeru Nagase, Parasuk Vudhichai, and Donglin Jiang*
J. Am. Chem. Soc. **2011**, 133, 14510–14513. DOI: 10.1021/ja2052396
Highlighted by Chemical & Engineering News, September 12, 2011, Volume 89 Issue 37 | p. 21 | Concentrates "Framework Compound Conducts Electrons – Availability of p-type and n-type conductors may drive these crystalline materials toward electronic applications"

Supercapacitive Energy Storage and Electric Power Supply Using an Aza-Fused Conjugated Microporous Framework

Yan Kou, Yanhong Xu, Zhaoqi Guo, and Donglin Jiang*
Angew. Chem., Int. Ed. **2011**, 50, 8753–8757. (VIP) DOI: 10.1002/anie.201103493 (Selected as Very Important Paper)
Highlighted by Nature Nanotechnology "porous polymer charged up", September 6, 2011

Highly Efficient Activation of Molecular Oxygen with Nanoporous Metalloporphyrin Frameworks in Heterogeneous Systems

Long Chen, Yong Yang, Zhaoqi Guo, and Donglin Jiang*
Adv. Mater. **2011**, 23, 3149–3154. DOI: 10.1002/adma.201100974

Synthesis of Metallophthalocyanine Covalent Organic Frameworks That Exhibit High Carrier Mobility and Photoconductivity

Xuesong Ding, Jia Guo, Xiao Feng, Yoshihito Honsho, Jingdong Guo, Shu Seki, Phornphimon Maitarad, Akinori Saeki, Shigeru Nagase, and Donglin Jiang*

Angew. Chem., Int. Ed. **2011**, 50, 1289–1293. DOI: 10.1002/anie.201005919

Porphyrin-Based Two-dimensional Covalent Organic Frameworks: Synchronized Synthetic Control of Macroscopic Structures and Pore Parameters

Xiao Feng, Long Chen, Yuping Dong, and Donglin Jiang*

Chem. Commun. **2011**, 47, 1979–1981. DOI: 10.1039/C0CC04386A

CMPs as Scaffolds for Constructing Porous Catalytic Frameworks: A Built-In Heterogeneous Catalyst with High Activity and Selectivity Based on Nanoporous Metalloporphyrin Polymers

Long Chen, Yong Yang, and Donglin Jiang*

J. Am. Chem. Soc. **2010**, 132, 9138–9143. DOI: 10.1021/ja1028556

Light-Harvesting Conjugated Microporous Polymers: Rapid and Highly Efficient Flow of Light Energy with a Porous Polyphenylene Framework as Antennae

Long Chen, Yoshihito Honsho, Shu Seki, and Donglin Jiang*

J. Am. Chem. Soc. **2010**, 132, 6624–6628. (Cover Page) DOI: 10.1021/ja100327h

Noncovalently Netted, Photoconductive Sheets with Extremely High Carrier Mobility and Conduction Anisotropy from Triphenylene-Fused Metal Trigon Conjugates

Long Chen, Jangbae Kim, Tomoya Ishizuka, Yoshihito Honsho, Akinori Saeki, Shu Seki, Hyotcherl Ihee, and Donglin Jiang*

J. Am. Chem. Soc. **2009**, 131, 7287–7292. DOI: 10.1021/ja901357h

A Photoconductive Covalent Organic Framework: Self-Condensed Arene Cubes with Eclipsed 2D Polypyrene Sheets for Photocurrent Generation

Shun Wan, Jia Guo, Jangbae Kim, Hyotcherl Ihee, and Donglin Jiang*

Angew. Chem., Int. Ed. **2009**, 48, 5439–5442. DOI: 10.1002/anie.200900881

The Non-Covalent Assembly of Benzene-Bridged Metallosalphen Dimers: Photoconductive Tapes with Large Carrier Mobility and Spatially Distinctive Conduction Anisotropy

Long Chen, Lu Wang, Xingfa Gao, Shigeru Nagase, Yoshihito Honsho, Akinori Saeki, Shu Seki, and Donglin Jiang*

Chem. Commun. **2009**, 45, 3119–3121. DOI: 10.1039/B904337C

Highly planar amphiphilic porphyrins

Masafumi Oda, Tomoya Ishizuka, Shigeo Arai, Atsushi Takano, and Donglin Jiang*

Tetrahedron Lett. **2009**, 50, 7137–7140.

Single-molecule Study on Intermolecular Interaction Between C60 and Porphyrin Derivatives: Toward Understanding How Strong the Multivalency

Yiheng Zhang, Ying Yu, Zhenhua Jiang, Huaping Xu, Zhiqiang Wang, Xi Zhang*, Masafumi Oda, Tomoya Ishizuka, Donglin Jiang*, Lifeng Chi, and Harald Fuchs*
Langmuir **2009**, 25, 6627–6632.

A Belt-Shaped, Blue Luminescent and Semiconducting Covalent Organic Framework
Shun Wan, Jia Guo, Jangbae Kim, Hyotcherl Ihee, and Donglin Jiang*

Angew. Chem., Int. Ed. **2008**, 47, 8826–8830. (VIP) DOI: 10.1002/anie.200803826

Selected as a frontispiece of ACIE.

Highlighted in Chemical & Engineering News by Jyllian N. Kemsley, “Covalent Conducting Belts”, 13 October, 2008 Volume 86, Number 41 P29.

Hydrothermal Treatment to Prepare Hydroxyl Group Modified Multi-Walled Carbon Nanotubes

Dong Yang, Guiquan Guo, Jianhua Hu, Changchun Wang, * and Donglin Jiang*

J. Mater. Chem. **2008**, 18, 350–354.

Synthesis of Magnetic Microspheres with Controllable Structure via Polymerization-Triggered Self-Positioning of Nanocrystals

Ao Xia, Jianhua Hu, Changchun Wang,* and Donglin Jiang*

Small **2007**, 3, 1811–1817.

Spin-Crossover Physical Gels: A Quick Thermoreversible Response Assisted by Dynamic Self-Organization

Tsuyohiko Fujigaya, Dong-Lin Jiang,* and Takuzo Aida*

Chem. Asian J. **2007**, 2, 106–113.

Dendritic Architectures for Design of Photo- and Spin-Functional Nanomaterials

Zheng He, Tomoya Ishizuka, and Donglin Jiang*

Polym. J. **2007**, 39, 889–922 (Award Account)

Relationship between Incoherent Excitation Energy Migration Processes and Molecular Structures in Zinc(II) Porphyrin Dendrimers

Sung Cho, Wei-Shi Li, Min-Chul Yoon, Tae Kyu Ahn, Dong-Lin Jiang, Jiwon Kim, Takuzo Aida, and Dongho Kim*

Chem. Eur. J. **2006**, 12, 7576–7584.

Construction of Segregated Arrays of Multiple Donor and Acceptor Units Using a Dendritic Scaffold: Remarkable Dendrimer Effects on Photoinduced Charge Separation

Wei-Shi Li, Kil Suk Kim, Dong-Lin Jiang, Hiroyuki Tanaka, Tomoji Kawai, Jung Ho Kwon, Dongho Kim, and Takuzo Aida*

J. Am. Chem. Soc. **2006**, 128, 10527–10532.

Spin-Crossover Dendrimer: Generation Number-Dependent Cooperativity in Thermal Spin Crossover

Tsuyohiko Fujigaya, Dong-Lin Jiang*, and Takuzo Aida*
J. Am. Chem. Soc. **2005**, 127, 5484–5489.

Cooperativity in Chiroptical Sensing with Dendritic Zinc Porphyrins
Wei-Shi Li, Dong-Lin Jiang*, Yuki Suna, and Takuzo Aida*
J. Am. Chem. Soc. **2005**, 127, 7700–7702.

Energy Funneling of IR Photons Captured by Dendritic Antennae and Acceptor Mode Specificity: Anti-Stokes Resonance Raman Studies on Iron(III)–Porphyrin Complexes with a Poly(aryl ether) Dendrimer Framework
Yu-Jun Mo, Dong-Lin Jiang, Makoto Uyemura, Takuzo Aida, and Teizo Kitagawa*
J. Am. Chem. Soc. **2005**, 127, 10020–10027.

Supramolecular Nanocarrier of Anionic Dendrimer Porphyrins with Cationic Block Copolymers Modified with Polyethylene Glycol to Enhance Intracellular Photodynamic Efficacy
Woo-Dong Jang, Nobuhiro Nishiyama, Guo-Dong Zhang, Atsushi Harada, Dong-Lin Jiang, Satoko Kawauchi, Yuji Morimoto, Makoto Kikuchi, Hiroyuki Koyama, Takuzo Aida, and Kazunori Kataoka*
Angew. Chem., Int. Ed. **2005**, 44, 419–423.

Bioinspired Molecular Design of Functional Dendrimers
Donglin Jiang,* and Takuzo Aida*
Prog. Polym. Sci. **2005**, 30, 403–422.

Self-Assembly of a π -Electronic Amphiphile Consisting of a Zinc Porphyrin-Fullerene Dyad: Formation of Micro-Vesicles with a High Stability
Richard Charvet, Dong-Lin Jiang, and Takuzo Aida*
Chem. Commun. **2004**, 2664–2665. (Highlighted in CAS Heart Cut; 17 January, 2005)

Photosensitized Hydrogen Evolution from Water by Using Conjugated Polymers Wrapped with Dendrimeric Electrolytes
Dong-Lin Jiang*, Cheol-Kyu Choi, Kayoko Honda, Wei-Shi Li, Tetsuro Yuzawa, and Takuzo Aida*
J. Am. Chem. Soc. **2004**, 126, 12084–12089. (Highlighted in *Nature*, 431, 643 (2004)).

Photoluminescence Properties of Discrete Conjugated Wires Wrapped within Dendrimeric Envelopes: “Dendrimer Effects” on π -Electronic Conjugation
Wei-Shi Li, Dong-Lin Jiang*, and Takuzo Aida*
Angew. Chem., Int. Ed. **2004**, 43, 2943–2947.

Switching of Spin States Triggered by a Phase Transition: Spin Crossover Properties of Self-Assembled Iron(II) Complexes with Alkyl-Tethered Triazole Ligands
Tsuyoshi Fujigaya, Dong-Lin Jiang*, and Takuzo Aida*
J. Am. Chem. Soc. **2003**, 125, 14690–14691.

Polyion Complex Micelles Entrapping Cationic Dendrimer Porphyrins: Effective Photosensitizer for Photodynamic Therapy of Cancer

Guo-Dong Zhang, Atsushi Harada, Nobuhiro Nishiyama, Dong-Lin Jiang, Hiroyuki Koyama, Takuzo Aida, and Kazunori Kataoka*

J. Contr. Release **2003**, 93, 141–150.

Morphology-Dependent Luminescence Properties of Poly(benzyl ether) Dendrimers

Shuichi Kimata, Dong-Lin Jiang, and Takuzo Aida*

J. Polym. Sci. A. Polym. Chem. **2003**, 41, 3524–3530.

Fluorescence Spectroscopic Properties and Single Aggregate Structures of π -Conjugated Wire-Type Dendrimers

Sadahiro Masuo, Hiroyuki Yoshikawa, Tsuyoshi Asahi, Hiroshi Masuhara, Takafumi Sato, Dong-Lin Jiang, and Takuzo Aida*

J. Phys. Chem. B **2003**, 107, 2471–2479.

pH-Sensitive Assembly of Light-Harvesting Dendrimer Zinc Porphyrin Bearing Peripheral Groups of Primary Amine with Poly(ethylene glycol)-b-poly(aspartic acid) in Aqueous Solution

Guo-Dong Zhang, Nobuhiro Nishiyama, Atsushi Harada, Dong-Lin Jiang, Takuzo Aida, and Kazunori Kataoka*

Macromolecules **2003**, 36, 1304–1309.

Light-Harvesting Ionic Dendrimer Porphyrins as New Photosensitizers for Photodynamic Therapy

Nobuhiro Nishiyama, Hendrik R. Stapert, Guo-Dong Zhang, Daisuke Takasu, Dong-Lin Jiang, Tetsuo Nagano, Takuzo Aida, and Kazunori Kataoka*

Bioconjugate Chem. **2003**, 14, 58–66.

Repetitive Contraction and Swelling Behavior of Gel-Like Wire-Type Dendrimer Assemblies in Solution Layer by Photon Pressure of a Focused Near Infrared Laser Beam

Sadahiro, Masuo; Hiroyuki, Yoshikawa; Tsuyoshi, Asahi; Hiroshi, Masuhara*; Takafumi Sato, Dong-Lin Jiang, and Takuzo Aida

J. Phys. Chem. B **2002**, 106, 905–909.

Persistent Spectral Hole-Burning Study on Dendrimer Porphyrins

Shinjiro Machida, Koichi Sugihara, Isoko Takahashi, Kazuyuki Horie, Dong-Lin Jiang, and Takuzo Aida*

J. Polym. Sci. Part B: Polym. Phys. **2002**, 40, 210–215.

Morphology Dependence of Radiative and Non-Radiative Relaxation Energy Balance in Photo-Excited Aryl-Ether Dendrimers as Observed by Fluorescence and Thermal Lens Spectroscopies

Yuki Wakabayashi, Manabu Tokeshi, Akihide Hibara, Dong-Lin Jiang, Takuzo Aida, and

Takehiko Kitamori*

J. Phys. Chem. B **2001**, 105, 4441–4445.

Fluorescent Doughnut-Like Assembling of Wire-Type Dendrimers Depending on Their Generation Numbers and Degrees of Polymerization

Sadahiro Masuo, Hiroyuki Yoshikawa, Tsuyoshi Asahi, Hiroshi Masuhara, Takafumi Sato, Dong-Lin Jiang, and Takuzo Aida*

J. Phys. Chem. B **2001**, 105, 2885–2889.

Dendritic Physical Gel: Hierarchical Self-Organization of a Peptide-Core Dendrimer to Form a Micron-Scale Fibrous Assembly

Woo-Dong Jang, Dong-Lin Jiang, and Takuzo Aida*

J. Am. Chem. Soc. **2000**, 122, 3232–3233.

Infrared Absorption Characteristics of Large-Sized Spherical Aryl Ether Dendrimers

Yuki Wakabayashi, Manabu Tokeshi, Akihito Hibara, Dong-Lin Jiang, Takuzo Aida, and Takehiko Kitamori*

Anal. Sci. **2000**, 16, 1323–1326.

Polyion Complex Micelles Encapsulating Light-Harvesting Ionic Dendrimer Zinc Porphyrins
Hendrik R. Stapert, Nobuhiro Nishiyama, Dong-Lin Jiang, Takuzo Aida, and Kazunori Kataoka*

Langmuir **2000**, 16, 8182–8188.

Long-Term Energy Storage of Dendrimers

Yuki Wakabayashi, Manabu Tokeshi, Dong-Lin Jiang, Takuzo Aida, Tsuguo Sawada, and Takehiko Kitamori*

J. Luminescence **1999**, 83-84, 313–315.

A Blue-Luminescent Dendritic Rod: Poly(phenyleneethynylene) within a Light-Harvesting Dendritic Envelope

Takafumi Sato, Dong-Lin Jiang*, and Takuzo Aida*

J. Am. Chem. Soc. **1999**, 121, 10658–10659.

Highlighted in *Chemical & Engineering News*

A New Approach to Light-Harvesting with Dendritic Antenna

Takuzo Aida, Dong-Lin Jiang, Eiji Yashima, and Yoshio Okamoto*

Thin Solid Films **1998**, 331, 254–258.

Morphology-Dependent Photochemical Events in Aryl Ether Dendrimer Porphyrins: Cooperation of Dendron Subunits for Singlet Energy Transduction

Dong-Lin Jiang, and Takuzo Aida*

J. Am. Chem. Soc. **1998**, 120, 10895–10901.

Dendrimer porphyrins for biomimetic applications

Daisuke Takasu, Nobuyuki Tomioka, Dong-Lin Jiang, Takuzo Aida, Toshiaki Kamachi, and Ichiro Okura*

J. Inorg. Biochem. **1997**, 67, 242.

Photoisomerization in Dendrimers by Harvesting of Low-Energy Photons

Dong-Lin Jiang, and Takuzo Aida*

Nature **1997**, 388, 454–456.

Highlighted in *Nature News & Views*, and *Chemical & Engineering News*

Dendrimer-Encapsulated Iron Porphyrin as a Novel Hemoprotein Mimic for Dioxygen Binding

Dong-Lin Jiang, and Takuzo Aida*

J. Macromol. Sci., Pure & Appl. Chem. A **1997**, 34, 2047–2055.

Aryl Ether Dendrimers with an Interior Metalloporphyrin Functionality as a Spectroscopic Probe: Interpenetrating Interaction with Dendritic Imidazoles

Yoriko Tomoyose, Dong-Lin Jiang, Ren-Hua Jin, Takuzo Aida, Takashi Yamashita, Kazuyuki Horie, Eiji Yashima, and Yoshio Okamoto*

Macromolecules **1996**, 29, 5236–5238.

Dendritic Iron Porphyrin as a Novel Haemoprotein Mimic: Effects of Dendrimer Cage on Dioxygen-Binding Activity

Dong-Lin Jiang, and Takuzo Aida*

Chem. Commun. **1996**, 1523–1524.

The Chemistry of Two-Dimensional Covalent Organic Frameworks

Donglin Jiang*

Koubunshi **2021**, 70 (3), 1-4. (in Japanese)

Synthetic Strategy of Two-Dimensional Polymers

Donglin Jiang*, and Atsushi Nagai

Kagaku (Kyoto) **2012**, 67, 66-67. (in Japanese)

Functionality Induction with Dendrimeric Structural Motifs. Light Harvesting, Molecular Recognition, and Spin Transition

Tomoya Ishizuka, and Donglin Jiang*

Shokubai **2008**, 50(4), 326-332. (in Japanese)

Construction of Drug Delivery Carriers with Dendrimers

Donglin Jiang*

Bionics **2005**, 8, 50–55. (in Japanese)

Synthesis of Functional Dendrimers

Takuzo Aida,* and Donglin Jiang

Mirai Zairyo **2001**, 1, 38–45. (*in Japanese*)

Molecular Design of Photofunctional Dendritic Polymers

Donglin Jiang*

Kagaku to Kogyo (Special Issue: Frontier of Chemistry 2000) **2000**, 53, 164–168. (*in Japanese*)

Infrared Multiphoton Absorption and Photochromism

Takuzo Aida,* and Donglin Jiang

Fine Chemicals (Special Issue: Frontiers of Organic Photochromism), **1999**, 28, 24–28. (*in Japanese*)

Exploration of Novel Functional Materials Using Dendrimers

Donglin Jiang, and Takuzo Aida*

JASCO Report **1999**, 41, 1–5. (*in Japanese*)

Functions of Dendrimers and Hyper-branched Polymers

Dong-Lin Jiang, and Takuzo Aida*

Kobunshi **1998**, 47, 812–815. DOI: 10.1295/KOBUNSHI.47.812 (*in Japanese*)

Molecular Trees that Harvest Multiple Photons

Takuzo Aida,* and Donglin Jiang

Kagaku (Kyoto) **1998**, 53, 23–25. (*in Japanese*)

Era for New Materials Science: Diverse Functions of Dendrimers

Donglin Jiang, and Takuzo Aida*

Gendai Kagaku (Special Issue: Nanoscale Chemistry) **1998**, 327, 32–40 (1998). (*in Japanese*)

Precision Polymerization and Polymers I. Molecular Design and Functions of Dendrimer Porphyrins

Dong-Lin Jiang, Reiko Sadamoto, Nobuyuki Tomioka, and Takuzo Aida*

Kobunshi Ronbunshu **1997**, 54, 674–683. DOI: 10.1295/Koron.54.674 (*in Japanese*)

Molecular Tree that Trap Multiple Photons

Takuzo Aida,* and Donglin Jiang

Opt News **1997**, 6, 25–28. (*in Japanese*)

Molecular Design of Functional Dendrimers

Donglin Jiang, and Takuzo Aida*

Nettowaku Porima **1996**, 17, 179–191. (*in Japanese*)

Book and Book Chapters

Monograph: *Covalent Organic Frameworks: Chemistry, Physics and Materials Science, I and II*, Donglin Jiang, Wiley, **2023**, ISBN: 9783527349890

Porphyrin and Phthalocyanine Covalent Organic Frameworks: Pre-Designable Structures and Tailor-Made Materials

Ruoyang Liu, and Donglin Jiang*

in *Porphyrim-Based Supramolecular Architectures: From Hierarchy to Functions*, RSC **2021**.

Porous Organic Polymers as a Molecular Platform for Designing Porous Carbons

Qing Xu, Qihong Jiang, and Donglin Jiang*

in *Carbon-Based Metal-Free Catalysts: Design and Applications*

PP101–131

Wiley-VCH Verlag GmbH & Co. KGaA

2018/10/8

Two-and Three-dimensional Covalent Organic Frameworks (COFs)

Qihong Chen, Ssaanka Dalapati, and Donglin Jiang*

in *Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*

PP 271–290

Elsevier **2017**/1/1

Design, Synthesis, and Functions of Conjugated Microporous Polymers

Donglin Jiang, * Shangbin Jin, Yanhong Xu, and Xiaoming Liu

Chapter 2 in *Nanoporous Materials: Synthesis and Applications*, Taylor & Francis Books, **2013**.

Molecular Design and Materials Exploration of Porous Organic Materials for Carbon Dioxide Storage

Atsushi Nagai, and Donglin Jiang*

Chapter 2, *The State-of-the-Art Technology for Direct Utilization of Carbon Dioxide* NTS, April, **2013**.

Two-Dimensional Semiconductive π -Electronic Frameworks

Donglin Jiang, * Xuesong Ding, and Jia Guo

Chapter 8 In *Supramolecular Soft Matter: Applications in Materials and Organic Electronics*, John Wiley & Sons, Inc., Hoboken, NJ, USA. **2011**.

Molecular Design and Functions of Dendritic Polymers

Dong-Lin Jiang*

In *Recent Progress in Polycondensation*. Ed. T. Matsumoto, Research Signpost, **2002**.

Dendritic Polymers: Optical and Photochemical Properties

Dong-Lin Jiang, and Takuzo Aida*

Chapter 17 in *Dendrimers and Other Dendritic Polymers*. Eds. J. M. J. Fréchet and D. A. Tomalia, John Wiley & Sons, **2001**.

Dendrimer Porphyrins and Metalloporphyrins: Synthesis, Structures, and Functions

Takuzo Aida,* and Dong-Lin Jiang

Chapter 23 in Vol. 3 of *The Porphyrin Handbook*. Eds. K. M. Kadish, K. M. Smith, and R. Guilard, Academic Press, **1999**.

Dendrimer Porphyrins for Biomimetic Applications

Dong-Lin Jiang, Reiko Sadamoto, Nobuyuki Tomioka, and Takuzo Aida*

in *Hyper-Structured Molecules I: Chemistry, Physics, and Applications*. Ed. H. Sasabe, Gordon and Breach Science Publishers, **1999**.

The Potential of Using Porous Covalent Organic Framework Materials for Photoenergy Conversions

Donglin Jiang*

Chapter 5, *High Efficiency Solar Cells*, NTS, **2012**. (in Japanese)

Basic Structure: Dendrimer as Functional Organic Molecules, Supramolecules, Nanotubes, and Functional Organic Motifs

Donglin Jiang*

Volume 2, *Introduction of Chemistry and Technology to Nanotechnology*

Kyoritsu Publish, **2007**. (in Japanese)

Molecular Tree that Absorb Light

Donglin Jiang*

The World of Explosive Photoscience from Quantum to Living Objects

Kubapuro, **2007**. (in Japanese)

Antennae Effect

Donglin Jiang*

Dendritic Polymers, NTS, August **2005**. (in Japanese)

Synthesis and Functions of Photofunctional Dendrimers

Takuzo Aida,* and Donglin Jiang

Chapter 3, in *Science and Technology of Dendrimers*, IPC, **2000**. (in Japanese)