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Personal Information

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Education

2010.3	**Ph.D. (Engineering),**
	Graduate School of Engineering, Osaka University, Japan
2007.3	**M.Sc.,**
	Graduate School of Engineering, Osaka University, Japan
2005.3	**B.Sc.,**
	Kobe City College of Technology, Japan

Professional Career

2023.08–Present	**Professor**,
	School of Engineering Science / School of Environmental Science and Engineering,
	Kochi University of Technology
2019.07–2023.07	**Associate Professor (Principal Investigator)**,
	School of Engineering Science / School of Environmental Science and Engineering,
	Kochi University of Technology
2016.04–2019.06	**Assistant Professor (Principal Investigator)**,
	School of Environmental Science and Engineering, Kochi University of Technology
2014.04–2016.03	**Research Associate**,
	School of Environmental Science and Engineering, Kochi University of Technology
2010.04–2014.03	**Postdoctoral Researcher**,
	Center for Emergent Matter Science, RIKEN

Grant

2022.04–2025.03	JSPS KAKENHI Grant-in-Aid for Scientific Research (C), Grant No. 22K04857
2019.03–2022.03	JSPS KAKENHI Grant-in-Aid for Scientific Research (C), Grant No. 19K05186
2017.04–2019.03	JSPS KAKENHI Grant-in-Aid for Young Scientists (B), Grant No. 17K14858
2013.04–2015.03	JSPS KAKENHI Grant-in-Aid for Young Scientists (B), Grant No. 25810120
2010.10–2012.03	JSPS KAKENHI Grant-in-Aid for Research Activity Start-up, Grant No. 22850020

Award

2021.11	Invention Award, *Japan Institute of Invention and Innovation*
2016.04	CSJ Presentation Award 2016, *The Chemical Society of Japan*
2016.01	International Solvothermal and Hydrothermal Association Conference (ISHA) 2016 Best Poster Award, *International Solvothermal and Hydrothermal Association*
2012.04	CSJ Presentation Award 2012, *The Chemical Society of Japan*

Publication List

(1) Effect of boron-doping on gate-opening CO_2 adsorption in zinc-benzimidazolate coordination networks, Ikuho Akiyama, Takeshi Kato, Shino Kannaka, Akitaka Ito, and Masataka Ohtani* *ACS Appl. Mater. Interfaces*, **2024**, *16*, 24816–24822.

(2) Thermodynamic analysis of gate-opening carbon dioxide adsorption behavior of metal-organic frameworks, Shino Kannaka, Ayumi Ohmiya, Chiho Ozaki, and Masataka Ohtani* *Chem. Commun.*, **2024**, *60*, 4170–4173. ***Selected as a Front Cover**

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(7) Influence of the nanostructural characteristics of inorganic fillers on the physical properties of resin cements, Shingo Mizobuchi, Takahiro Kato, Bunichiro Yamada, Kai Kan, Masataka Ohtani, and Kazuya Kobiro, *Dent. Mater. J.* **2023**, *42*, 291–299.

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(9) Insights into the solvothermal reaction for synthesizing Tin(IV) oxide porous spheres, Ayano Taniguchi, Rei Miyata, Masataka Ohtani*, and Kazuya Kobiro, *RSC Adv.*, **2022**, *12*, 22902–22910.

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(11) Thermal crystal phase transition in zeolitic imidazolate frameworks induced by nanosizing the crystal, Takaya Kaneshige, Hikaru Sakamoto, and Masataka Ohtani*, *Chem. Commun.*, **2022**, *58*, 4599–4591. ***Highlighted in "*Chemical Communications HOT Articles 2022*" *Selected as a Front Cover**

(12) Tailoring orientation of microstructure for improving thermopower factor in Mg-doped $CuCrO_2$ thick films, Dung Van Hoang, Anh Tuan Thanh Pham, Truong Huu Nguyen, Hoa Thi Lai, Dai Cao Truong, Thu Bao Nguyen Le, Thuy Dieu Thi Ung, Masataka Ohtani, Vinh Cao Tran, and Thang Bach Phan, *Appl. Phys. Lett.*, **2022**, *120*, 063902.

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phase transition behaviour, Yoshitaka Kumabe, Kai Kan, Masataka Ohtani*, and Kazuya Kobiro, *RSC Adv.*, **2020**, *10*, 14630–14636.

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(21) Controllable synthesis of MoS_2/graphene low-dimensional nanocomposites and their electrical properties, L. N. Long, P. T. Thi, P. T. Kien, P. T. Trung, M. Ohtani, Y. Kumabe, Hirofumi Tanaka, S. Ueda, H. Lee, P. B. Thang, T. V. Khai, *Appl. Surf. Sci.*, **2020**, *504*, 144193.

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(34) A simple synthetic approach to Al_2O_3–TiO_2 and ZnO–TiO_2 mesoporous hollow composite assemblies consisting of homogeneously mixed primary particles at the nano level, Pradeep, E. K. C., Masataka Ohtani*, and Kazuya Kobiro, *Eur. J. Inorg. Chem.*, **2015**, *34*, 5621–5627.

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(37) Ultra-simple synthetic approach to the fabrication of CeO_2–ZrO_2 mixed nanoparticles into homogeneous, domain, and core–shell structures in mesoporous spherical morphologies using supercritical alcohols, Pradeep, E. K. C., Teppei Habu, Hiroko Tooriyama, Masataka Ohtani*, and Kazuya Kobiro, *J. Supercrit. Fluids*, **2015**, *97*, 217–223.

(38) Magnetically induced anisotropic orientation of graphene oxide locked by *in situ* hydrogelation, Linlin Wu[†], Masataka Ohtani[†], Masaki Takata, Akinori Saeki, Shu Seki, Yasuhiro Ishida, and Takuzo Aida, *ACS Nano*, **2015**, *8*, 4640–4649. [†] *These authors equally contributed to this work.*

(39) High water content clay–nanocomposite hydrogels incorporating guanidinium-pendant methacrylamide: tuning of mechanical and swelling properties by supramolecular approach, Linlin Wu, Masataka Ohtani, Shingo Tamesue, Yasuhiro Ishida, and Takuzo Aida, *J. Polym. Sci. Part A: Polym. Chem.*, **2014**, *52*, 839–847.

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ABA triblock copolyethers carrying guanidinium ion pendants, Shingo Tamesue, Masataka Ohtani, Kuniyo Yamada, Yasuhiro Ishida, Jason M. Spruell, Nathaniel A. Lynd, Craig J. Hawker, and Takuzo Aida, *J. Am. Chem. Soc.*, **2013**, *135*, 15650–15655.

(42) Photoelectrochemical cell based on cup-shaped nanocarbon-fullerene composite nanocluster film: enhancement of photocurrent generation by cup-shaped nanocarbons as an electron transporter, Masataka Ohtani and Shunichi Fukuzumi, *Fullerenes, Nanotubes, Carbon Nanostruct.*, **2010**, *18*, 251–260.

(43) Photoelectrochemical properties of donor-acceptor nanocomposite films composed of porphyrin-functionalized cup-shaped nanocarbon materials, Masataka Ohtani and Shunichi Fukuzumi, *J. Porphyrins Phthalocyanines*, **2010**, *14*, 452–458. ***Highlighted on the Cover Page**

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(47) Nanostructural control of cup-stacked carbon nanotubes with 1-benzyl-1,4-dihydronicotinamide dimer via photoinduced electron transfer, Kenji Saito, Masataka Ohtani, and Shunichi Fukuzumi, *Chem. Commun.*, **2007**, 55–57. ***Highlighted on the Inside Cover Page**

(48) Electron-transfer reduction of cup-stacked carbon nanotubes affording cup-shaped carbons with controlled diameter and size, Kenji Saito, Masataka Ohtani, and Shunichi Fukuzumi, *J. Am. Chem. Soc.*, **2006**, *128*, 14216–14217.

Research Interest

Porous Nanomaterials, Metal-Organic Frameworks (MOFs), Coordination Polymers (CPs), Covalent Organic Frameworks (COFs), Catalysts, Gas Adsorption/Separation Materials, Stimuli-Responsive Materials, Phase Transition, Thermodynamic Analysis, Electron Microscopy (TEM/STEM, SEM, EDX, EELS), Electron-Diffraction Crystallography (microED)