

# CURRICULUM VITAE

(April 15, 2025)

- Name

Makoto OGAWA

- Birth date

August 24, 1964

- Education

-Graduate in Applied Chemistry (Inorganic chemistry), Waseda University, Tokyo  
1987

-Dr. Engineering, Graduate School of Waseda University, Tokyo 1992, Supervised by  
Professor Chuzo Kato.

- Positions and Professional Activities

- **1991-: Research Associate**, Waseda University, Tokyo
- **1992-: Post Doctoral Fellow**, The Institute of Physical and Chemical Research, Saitama, Japan.
- **1995-: Lecturer**, Department of Earth Sciences, Waseda University, Tokyo, Japan
- **1998-: Associate Professor**, Department of Earth Sciences, Waseda University, Tokyo, Japan
- **2004-: Professor**, Department of Earth Sciences, Waseda University, Tokyo, Japan
- **2015-: Professor**, Institute of Energy Science and Engineering,  
Vidyasirimedhi Institute of Science and Technology, Rayong, Thailand
- **2025-: Professor**, Shinshu University, Japan

### Cross appointments

- **1995-2000: Researcher**, PRESTO, Japan Science and Technology Agency (JST)
- **2005 Visiting Professor**, University Montpellier II, Montpellier, France
- **2010 Guest Professor**, Okayama University of Sciences
- **2011 Guest Professor**, Hiroshima University
- **2013 Guest Professor**, ERASMUS
- **2009 Visiting Professor**, University Montpellier II, Montpellier, France
- **2010 Visiting Scientist**, ISIC, Madrid, Spain
- **2012 Visiting Professor**, University of Ottawa, Canada

- **2015~2016: Educational Advisor**, Japan Advanced Institute of Science and Technology (JAIST), Ishikawa, Japan
- **2015~2018: Research Advisor**, National Institute of Materials Science (NIMS), Ibaraki, Japan
- **2018~2023: Visiting Professor**, Japan Advanced Institute of Science and Technology (JAIST), Ishikawa, Japan
- **2018~: Visiting Professor** Shinshu University
- **2025~: Adjunct Professor** Nagano University

- **Teaching Courses**

- ***Undergraduate (at Waseda University)***

General Chemistry (basics), Environmental chemistry, Chemistry experiment, Instrumental analyses (experiment), Analytical chemistry (experiment), Summer course for visiting mine and factory, Minerals and matters, Chemistry and physics of minerals (solid-state chemistry)

- ***Graduate (at Waseda University and Vidyasirimedhi Institute)***

Physics and chemistry of minerals, Clay sciences, Hybrid materials, Inorganic materials chemistry, Solid-state chemistry, Advanced materials

***Graduate short course***

Inorganic materials chemistry (Hiroshima Univ., Okayama Sci. Univ.), Hybrid Materials (ERASMUS),

- **Editorial**

*Associate editor of Recent Patents on Nanotechnology and Applied Clay Science (Elsevier)*

*Editorial board of Clay Science (Clay Science Society of Japan)*

- **Member of Scientific Committees**

*Council of AIPEA (International Association of Study on Clay) (2013-2022), The Clay Science Society of Japan (2001-2014) and Materials Science Society of Japan (2007-2014), Fellow of Royal Society of Chemistry, American Chemical Society*

- **Organization and Management Tasks**

Member of the International Advisory Board of International Conference on Silica (Silica 2001), Mulhouse, 2001

Member of organizing committee of International Symposium on Photocatalysts and Surface Photochemistry, Tokyo, 2003

Member of organizing committee of 13th International Clay Conference (ICC13), Tokyo 2005

Member of Symposium Organizer of E-MRS, Strasburg, France 2005

Chair of organizing committee of International Symposium on Physics and Chemistry of Smectites, Tokyo 2005

Co-Chair of organizing committee of International Symposium on Hierarchically Designed Hybrid Systems, Tokyo 2008

Co-Chair of organizing committee of International Seminar on New designs and new functionalities for ceramic and hybrid nanostructured materials and thin films, Montpellier, 2009

Member of organizing committee of International Symposium on Zeolites and Microporous Crystal (ZMPC2009), Tokyo, 2009

Member of organizing committee of International Symposium on Zeolites and Microporous Crystal (ZMPC2012), Hiroshima, 2012

Member of organizing committee of International Symposium on Mesoporous and Mesostructured Materials, Hyogo, 2013

Chair of organizing committee of International Symposium on Materials Chemistry of Intercalation Compounds, Tokyo 2013

Member of organizing committee of International Symposium on Zeolites and Microporous Crystal (ZMPC2015), Sapporo, 2015

Chair of organizing committee of VISTEC Symposium on Hybrids and Biohybrids, Rayong, Thailand, 2016

Chair of organizing committee of NanoM2017, Rayong, Thailand, 2017

Co-chair of organizing committee of The 3<sup>rd</sup> Symposium of the Center for Nature-derived Materials (Excellent Core) & The 4<sup>th</sup> International Symposium for Green-Innovation Polymers (GRIP2017), Ishikawa, Japan, 2017.

Chair of organizing committee of The 4<sup>th</sup> Asian Clay Conference 2020, Thailand 2020

Chair of organizing committee of International Conference of Nanospace Materials Rayong, Thailand, 2021

Manager of the Department of Earth Sciences, Waseda University (2006-2008, 2013-2014)

Chair of organizing committee of International Conference of Nanospace Materials  
2022 Thailand, Pattaya, Thailand, 2022

Chair of organizing committee of International Conference of Nanospace Materials  
2024 Thailand, Rayong, Thailand, 2024

**•Awards**

2000            Winner of the Young Scientist Award, The Clay Science Society of Japan.

2001            Winner of the Excellent New Technology Award, International New technology Fair, Tokyo.

2003            Winner of the Clay Science Society Award, The Clay Science Society of Japan.

2017            Chair Professor Grant, National Science and Technology Development Agency (NSTDA), Thailand

**•Former Students**

**PhD THESES**

N. Khaorapapong      T. Okada      N. Kakegawa      Y. Ide

N. Miyamoto      T. Miyagi      N. Kanzaki      K. Shiba

N. Shimura      M. Nakade      T. Nagao      A. Ontam

P. Pimchan      S. Intachai      KG. Vibulyaseak      T.T Sirinakorn,

A.P. Teepakakorn      S.B. Deepracha      K.J. Imwiset      S.G. Intasa-Ard

T.K. Saothayanun      R. P. Wijitwongwan      S. J. Cheepborisutikul

D. A. Sruamsiri      N. K. Paengjun

A. F. Phuekphong      P.M. Saengdet      C.B. Tirayaphanitchkul

**MS THESES**      More than 100 students.

## Alumni position

Shinshu University, Nagaoka University of Technology, Fukuoka Institute of Tech.,  
Khon Kaen Univ., National Institute of Materials Sciences, Akita University, Tokyo  
University of Agriculture and Technology,

Toyota, Matsuda, Nissan, Bridgestone, Panasonic, Hitachi, Canon, Nikon, Mitsubishi  
Chemical, Sumitomo Chemical, Hitachi Chemical, 3M, TOTO, Nippon Paint, Oji  
Paper, Nihon Paper, Kao, Lion, Kose, RICHO, Suntory, Hisamitsu, Mitsubishi  
Pencil, Mitsubishi Bank, Nissho Iwai, Japan Fine Ceramic Center, IRPC, PTT GC,  
PTT EP, etc.

## **R & D Projects Leader (Since 1995)**

### ***Year/Title/ (Funds)***

- 1995-1998 Construction of novel molecular assemblies at inorganic-organic interfaces (Japan Science and Technology Agency (JST), Japan)
- 1998-2000 Creation of nanopore on the inorganic solids (Japan Science and Technology Agency (JST), Japan)
- 1998-1999 Selective adsorbents derived from organic modification of layered solids (MEXT, Japan)
- 1998-1999 Selective adsorbents derived from organic modification of layered solids (MEXT, Japan)
- 2002 Photofunctions of dye-attached mesoporous silica, (MEXT, Japan)
- 2003-2004 Photofunctions of dye-attached mesoporous silica, (MEXT, Japan)
- 2004-2005 Construction of novel molecular assemblies at inorganic-organic interfaces, (Tokuyama Science Foundation)
- 1996-1999 Selective adsorbents derived from organic modification of layered solids, (Waseda University, Japan)
- 2001 Morphosyntheses of inorganic solids, (Waseda University, Japan)
- 2007-2009 Preparation of functional core-shell particles, (Waseda University, Japan)
- 2007 Morphosyntheses of inorganic solids, (Hosokawa Foundation, Japan)
- 2009 Morphosyntheses of layered double hydroxides, (Kansai Research Institute (KRI), Japan)
- 2011 Functionallization of nanospace materials by host-guest interactions, (Waseda University, Japan)
- 2013 Precisely designed hybrid particles, (Nippon Sheet Glass Foundation, Japan)
- 2016 Flow reactor syntheses of well-defined nanoparticles (IRPC, Thailand)
- 2017 Hybrid materials design of artificial photosyntheses, Chair Professor Grant, National Science and Technology Development Agency (NSTDA), Thailand
- 2021 Cooperative Research Program of Institute for Catalysis, Hokkaido University
- 2021 MEXT Promotion of Distinctive Joint Research Center Program from Photocatalysis International Research Center, Research Institute for Science and Technology, Tokyo University of Science, Japan

2021 Joint research program of the Institute of Materials and Systems for Sustainability, Nagoya University

2021 Program Management Unit for Human Resources & Institutional Development, Research and Innovation, NXPO, Thailand

2022-2024 Bio-geo hybrid pigment, Distinguished Professor Grant, National Research Council of Thailand (NRCT)

Other projects and consulting;

2011~2014 Application of inorganic materials as filler of rubber (Bridgestone Co., Tokyo, Japan)

2013 Core-shell particles for filler application (Daikin Inc., Osaka, Japan)

2012 Organic derivative of layered solids (Otsuka Chemical Ind., Tokushima, Japan)

2009 Organic derivative of layered silicates (Nichiyu Ind. Co., Nagoya, Japan)

2009 Porous silica spheres for chromatography applications (YMC Co., Kyoto, Japan)

2008 Application of surfactants (Daiichi Chemical Ind. Co., Kyoto, Japan)

2008 Hybrid pigments for paint applications (Kansai Paint Co., Hiratsuka, Japan)

2007 Hybrids for cosmetics (KOSE, Tokyo, Japan)

## PUBLICATIONS

ResearchGate: [https://www.researchgate.net/profile/Makoto\\_Ogawa](https://www.researchgate.net/profile/Makoto_Ogawa)

ORCID number: 0000-0002-3781-2016

- **Referee** (ca. 50~100 papers per year, American Chemical Society as *Chem.Mater.*, *J.Am. Chem. Soc.*, *Langmuir*; *J. Phys. Chem., Inorganic Chemistry*, *ACS Applied Mater. Interface*, *Macromolecules*; Royal Society of Chemistry as *Chem.Comm.*, *Chem.Sci.*, *Dalton Trans.*, Chemical Society of Japan as *Chem.Lett.*, *Bull. Chem. Soc. Jpn*; Others: *Sci. Rep.*, *Chem. European J.*, *Chem. Asian J.*, *Appl. Clay Sci.*; *Clays Clay Miner.*, *Microporous & Mesoporous Materials*, *J. Colloid Interface Sci.* etc.)
- **Articles in Scientific Journals and Book Chapters:** *More than 300 original papers, more than 50 book chapters and reviews.*
- **H-index** 64 (According to Google Scholar on March 20th, 2025)
- **Total citation** 16,000~ (According to Google Scholar on March 20th, 2024)
- **Patents more than 10**

## LIST OF PUBLICATIONS

### *ARTICLES*

#### **2025**

Thongsamakphan S.; Goulvestre, L.; Saengdet, P. M.; Ogawa, M., “Self-healing clay-polymer composite hydrogel obtained by evaporation induced cross-linking and subsequent anisotropic swelling”, *Applied Clay Sci.*, in press.

Maluangnont, T.; Sriphan, S.; Chaithawee, K.; Vittayakorn, N.; Wijitwongwan, R.; Ogawa, M. “AC Electrical Properties of a NiFe Layered Double Hydroxide with Exceptionally Low Charge Density” *J. Phys. Chem. C*, in press.

Cheepborisutikul, S. J., Kessaratkoon, T., D'Elia, V., Ogawa, M. “Precisely designed synthesis of hollow Zn<sub>2</sub>SiO<sub>4</sub> particles from ZnO/SiO<sub>2</sub> core/shell particles with varied silica thickness”, *Cryst. Growth Des.*, in press.

Ando, Y., Miyakage, T., Anzai, A., Huang, M., El Fakir, A.A., Toyao, T., Nakasaka, Y. Phuekphong, A., Ogawa, M., Kolganov, A.A., Pidko, A.D., Shimizu, K., “Conversion of Polypropylene to Light Olefins by HMFI Catalysts below Pyrolytic Temperature: Catalytic, Spectroscopic, and Theoretical Studies”, *J. Phys. Chem. C*, **129**, 1678-1691 (2025).

Vejchakul, K., Ogawa, M., “Template Syntheses of Anatase Nanoparticles Using a Nanoporous Polyimide Membrane: Implications for Deposition of Platinum for Photocatalytic H<sub>2</sub> Evolution”, *ACS Appl. Nano Mater.*, **8**, 3402-3412 (2025).

## 2024

Saengdet, P. M., Takeoka, Y., Ogawa, M., “Antifreezing and Thermal Hardening of a Gelatin–Smectite Nanocomposite Hydrogel”, *Chem. Mat.*, **36**, 10276-10284 (2024).

Khositanon, Ch., Saothayanun, T., Sirimongkhol, W., Sukpancharoen, S., Ogawa, M., Bureekaew, S., Weeranoppanant, N., “Continuous Flow Hydroxylation of Benzene to Phenol in a Photocatalytic Milli-structured Flat-plate Reactor”, *ACS Sustain. Chem. Eng.*, **12**(37), 13998-14008 (2024).

Saothayanun, T., Inchongkol, Y., Weeranoppanant, N., Kondo, M., Ogawa, M., Breekaew, S. “Self-Shuttle-Mediated Electron Transfer to Boost Photocatalytic Hydrogen Production of Co–Zn Bimetallic MOF”, *J. Mater. Chem. A*, **12**(39), 26743-26748 (2024).

Paengjun, N., Polshettiwar, V., Ogawa, M., “Designed Synthesis of BiOBr/BiOI Nanosheet Heterojunction Anchored on Dendritic Fibrous Nanosilica as Visible-Light Responsive Photocatalysts”, *Inorg. Chem.*, **63**, 11870–11883 (2024).

Pittayatornkul, J., Maluangnont, T., Siriporn, J., Praserthdam, P., Ogawa, M., Sooknoi, T., “Water-assisted ketonization of methyl palmitate to palmitone over metals incorporated TiO<sub>2</sub> catalysts”, *React. Chem. Eng.*, **9**(9), 2345-2357 (2024).

Imwiset, K.J., Dudko, V., Markus, P., Papastavrou, G., Breu, J., Ogawa, M., “Forceless spontaneous delamination of high-aspect ratio fluorohectorite into monolayer nanosheets in chloroform”, *Chem. Commun.*, **60**, 6383-6386 (2024).

Tirayaphanitchkul, C., Auepattana-Aumrung, K., Crespy, D., Ogawa, M. “Responsive Polymer-Layered Silicate Hybrids for Anticorrosion”, *ACS Appl. Polym. Mater.*, **6**(4), 2129-2138 (2024).

Tanjindaprateep, S. P., Kidkhunthod, P., Pattanasattayavong, P., Ogawa, M. “Incorporation of iron (III) into nanoporous silica spheres”, *Colloids Surf. A: Physicochem. Eng. Asp.*, **686**, 133305 (2024).

Soontornchaiyakul, W., Takada, K., Kaneko, T., Ogawa, M. “Nanoarchitectonics of a Smectite with 4,4'-Diammonium- $\alpha$ -truxillic Acid and Its Methyl Ester for the Removal of o-Phenylphenol and Biphenyl from Water”, *Inorg. Chem.*, **63**, 2787-2792 (2024).

Usuki, S., Machida, S., Katsumata, K., Ogawa, M., Latthe, S. S., Liu, S., Yamatoya, K., Nakata, K. “Mechanism of Selective Q $\beta$  Bacteriophage Inactivation under the Presence of E. Coli Using Ground Rh-Doped SrTiO<sub>3</sub> Photocatalyst”, *Catalysts*, **14**, 94 (2024).

Wijitwongwan, R. P., Ogawa, M. “NiFe Layered Double Hydroxides with Controlled Composition and Morphology for the Efficient Removal of Cr(VI) from Water”, *Langmuir*, **40**, 1408-1417 (2024).

Saengdet, P. M., Ogawa, M. "Swelling-Induced Chromotropism of Bionanocomposite Hydrogel Beads", *Langmuir*, **40**, 1016-1023 (2024).

## 2023 (11)

Thongsamakphan, S. P., Ogawa, M. "Hybridization of Quinacridone and Synthetic Hectorite and the Photoluminescence Quenching by Metal Ion", *Appl. Clay Sci.*, **245**, 107148 (2023).

Sruamsiri, D., Shimojima, A., Ogawa, M. "Novel Floating Adsorbent for Water Treatment: Organically Modified Layered Alkali Silicate by Facile Mechanochemical Reaction", *ACS Appl. Mater. Interfaces.*, **15**, 41130-41140 (2023).

Cheepborisutikul, S. J., Ogawa, M. "Controlled Phase Transformation and Crystal Growth of Titanium Dioxide from Anatase/Silica Core/Shell Particles", *Inorg. Chem.*, **62**, 12166-12174 (2023).

Yamaguchi, T., Imwiset, K. J., Choi, M. G., Oh, J.-M., Lee, S. Y., Ogawa, M. "Improved quantum yield of thermally activated delayed fluorescence by nanoconfinement in organophilic octosilicate", *Appl. Clay Scie.*, **236**, 106882 (2023).

Dechnarong, N., Teepakakorn, A., Ogawa, M. "Preparation of Porous Aggregates of Smectite by Spray Drying Combined with the Intercalation of a Water-soluble Polymer", *Chem. Lett.*, **52**, 163-166 (2023).

Vejchakul, K., Saothayanun, T., Phuekphong, A., Paengjun, N., Ogawa, M. "Photocatalytic hydrogen evolution from water by the anatase prepared on resorcinol-formaldehyde resin sphere", *J. Porous Mater.*, **30**, 303-310 (2023).

Dechnarong, N., Ogawa, M. "Soap-Free Emulsion Composed of Polymer Solutions and an Aqueous Clay Suspension", *Langmuir*, **39**, 756-762 (2023).

Maluangnont, T., Pulphol, P., Klangvijit, K., Bowornthommataksana, K., Chanlek, N., Ogawa, M., Wongwiriyapan, W. "Electrochemical and electrical characteristics of ball milled  $\text{Cs}_2\text{Ti}_6\text{O}_{13}$  modified by the surface-to-bulk migration of hydroxyl groups", *Dalton Trans.*, **52**, 11815-11825 (2023).

Wijitwongwan, R. P., Saothayanun, T. K., Ogawa, M. "Synthesis of NiFe layered double hydroxides with varied layer charge densities: the templating effect of dioctyl sulfosuccinate.", *Dalton Trans.*, **52**, 4692-4699 (2023).

Intasa-Ard, S., Ogawa, M., "Homogeneous Precipitation of Mg/Al Layered Double Hydroxide from Concentrated Metal Salt Solution under Hydrothermal Conditions", *J. Solid State Chem.*, **317**, 123664 (2023).

Waribam, P., Jaiyen, K., Samart, C., Ogawa, M., Guan, G., Kongparakul, S., "MXene-Copper Oxide/Sulfonated Polyether Ether Ketone as a Hybrid Composite Proton Exchange Membrane in Electrochemical Water Electrolysis", *Catal. Today*, **407**, 96-106 (2023).

## 2022 (15)

Saothayanun, T. K., Wijitwongwan, R. P., Ogawa, M., "Efficient p–n Heterojunction Photocatalyst Composed of Bismuth Oxyiodide and Layered Titanate", *Inorg. Chem.*, **61**(50), 20268–20276 (2022).

Vibulyaseak, K., Paengjun, N., Kudo, A., Ogawa, M., "Well-Defined Single and Bundled Rutile Nanorods in Mesoporous Silica for Efficient Hydrogen Evolution Photocatalysis", *ACS Appl. Nano Mater.*, **5**(12), 18004-18013 (2022).

Intasa-ard, S.G., Ogawa, M. "Simple and Cost-effective Mass Production of Nitrate Type MgAl Layered Double Hydroxide: Titration from Concentrated Solution", *Appl. Clay Sci.*, **228**, 106615 (2022).

Saito, K., Inaguma, K., Ogawa, M., Ha, P. T., Akiyama, H., Yamaguchi, S., Minokoshi, H., Ogasawara, M., Kato, S., "Lepidocrocite-Type Layered Titanate Nanoparticles as Photocatalysts for H<sub>2</sub> Production", *ACS Appl. Nano Mater.*, **5** (7), 9053–9062 (2022).

Phuekphong, A., Hayakawa, T, Ogawa M. "A Novel Geo-photocatalyst, an Iron-Containing Layered Clay Mineral, for Photocatalytic H<sub>2</sub> Evolution from Water", *Chem. Commun.*, **58**(91), 12661-12664 (2022).

Ogawa, M., Yoshida, T., "Six-fold difference in structure results in six-order difference in conductivity: silica shell nanoarchitectonics on carbon black particle", *Nanoscale*, **14**, 7480 - 7483 (2022).

Sirinakorn, T., Saothayanun, T., Sriamsiri, D., and Ogawa, M., "Post-synthetic particle size reduction of a layered cesium titanate (Cs<sub>2</sub>Ti<sub>5</sub>O<sub>11</sub>) for the improvement of photocatalytic H<sub>2</sub> production", *J. Phys. Chem. Solids*, **163**, 110541 (2022).

Teepakakorn, A., Hayakawa, T., and Ogawa, M., "Remarkable stability of dye in polymer-clay nanocomposite film", *Appl. Clay Sci.*, **218**, 106405 (2022).

Nag, A., Hayakawa, T., Minase, M., and Ogawa, M., "Organophilic Clay with Useful Whiteness", *Langmuir*, **38**, 2979-2985 (2022).

Morita, M., Horiuchi, Y., Matsuoka, M., and Ogawa, M., "Preparation of Titanium-Containing Layered Alkali Silicates", *Cryst. Growth Des.*, **22**(3), 1638-1644 (2022).

Khositanon, C., Deepacha, S., Assabumrungrat, S., Ogawa, M., and Weeranoppanant, N., "Simple Fabrication of a Continuous-Flow Photocatalytic Reactor Using Dopamine-Assisted Immobilization onto a Fluoropolymer Tubing", *Ind. Eng. Chem. Res.*, **61**(3), 1322-1331 (2022).

Saengdet, P., and Ogawa, M., "Mechanochromic luminescence of a bionanocomposite hydrogel", *Chem. Commun.*, **58**, 3278-3281 (2022).

Sruamsiri, D., and Ogawa, M., “Adsorption of Pb<sup>2+</sup> on a layered alkali titanate from water”, *IOP Conference Series: Earth and Environmental Science*, **950**(1), 012040 (2022).

Leelaphattharaphan, N., Deepracha, S., Yamaguchi, T., and Ogawa, M., “Adsorption of a Spiropyran on a Layered Clay Mineral”, *IOP Conference Series: Earth and Environmental Science*, **950**(1), 012041 (2022).

Yamaguchi, T. Ogawa, M. “Photoinduced movement; how photoirradiation induced the movements of matter”, *Sci. Technol. Adv. Mater.*, **23**(1), 796-844 (2022).

## 2021 (21)

Nag, A., Ali, M.A., Zhou, J., Ogawa, M. and Kaneko, T., “Synergistic effects of polybenzimidazole and aramide on enhancing flame retardancy and solubility”, *Macromol. Mater. Eng.*, **306**(11), 2100459 (2021).

Nakato, T., Sirinakorn, T., Ishitobi, W., Mouri, E., Ogawa, M., “Cooperative Electric Alignment of Colloidal Graphene Oxide Particles with Liquid Crystalline Niobate Nanosheets”, *Bull. Chem. Soc. Jpn.*, **94**(12), 2871-2879 (2021).

Teepakakorn, A., Ogawa, M., “Composition-Dependent Thermal Stability and Water-Induced Self-Healing Behavior of Smectite/Waterborne Polymer Hybrid Film”, *Langmuir*, **37**(44), 12887-12896 (2021).

Okada, T., Izumi, K., Kawaguchi, S., Moriyoshi, C., Fujimura, T., Sasai, R., Ogawa, M., “Important Roles of Water Clusters Confined in a Nanospace as Revealed by a Synchrotron X-ray Diffraction Study”, *Langmuir*, **37**(35), 10469-10480 (2021).

Kunthom, R., Cheepborisutikul, S.J., Ogawa, M., “Well-defined hexagonal platy particles of brucite, brucite/silica core shell, and hollow silica particle”, *Bull. Chem. Soc. Jpn.*, **94**, 2396–2401 (2021).

Saothayanun, T., Ogawa, M., “Mechanochemical syntheses of all-inorganic iodide perovskites from layered cesium titanate and bismuth (and antimony) iodide”, *Chem. Commun.*, **57**(78), 10003-10006 (2021).

Paengjun, N., Ogawa, M., “Formation of BiOX (X = Cl and Br) in a mesoporous silica by the infiltration of Bi salts and the subsequent reaction with HX vapor”, *Chem. Commun.*, **57**(66), 8139-8142 (2021).

Suppasso, C., Pongkan, N., Intachai, S., Ogawa, M., Khaorapapong N, “Magnetically recoverable  $\beta$ -Ni(OH)<sub>2</sub>/ $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>/NiFe-LDH composites; isotherm, thermodynamic and kinetic studies of synthetic dye adsorption and photocatalytic activity”, *Appl. Clay Sci.*, 106115 (2021).

Sanguanwong, A., Flood, A.E., Ogawa, M., R Martín-Sampedro, M Darder, B Wicklein, P Aranda, E Ruiz-Hitzky, “Hydrophobic composite foams based on

nanocellulose-sepiolite for oil sorption applications”, *J. Hazard. Mater.*, 126068 (2021).

Imwiset, K.J., Ogawa, M., “Highly Luminescent Inorganic–Organic Hybrids with Molecularly Dispersed Perylene”, *Inorg. Chem.*, **60**(13), 9563–9570 (2021).

Wijitwongwan, R.P., Intasa-ard, S., Ogawa, M., “Preparation of MgGa layered double hydroxides and possible compositional variation”, *Nanomaterials*, **11**(5), 1206 (2021).

Yamaguchi, T., Imwiset, K.J., Ogawa, M., “Efficient Negative Photochromism by the Photoinduced Migration of Photochromic Merocyanine/Spiropyran in the Solid State”, *Langmuir*, **37**(12), 3702-3708 (2021).

Cheepborisutikul, SJ., Ogawa, M., “Suppressing the photocatalytic activity of titania by precisely controlled silica coating”, *Inorg. Chem.*, **60**(9), 6201–6208 (2021).

Teepakakorn, A.P., Ogawa, M., “Self-healing polymer–clay hybrids by facile complexation of a waterborne polymer with a clay”, *Mater. Adv.*, **2**(11), 3770-3776 (2021).

Saengdet, P.M., Ogawa, M., “Directional growth of octacalcium phosphate using micro-flow reactor mixing and subsequent aging”, *RSC Advances*, **11**(26), 15969-15976 (2021).

Sruamsiri, D., Sirinakorn, T., Ogawa, M., “Efficient Concentration of Lead from water by the reactions with layered alkali silicates, magadiite and octosilicate”, *Clays and Clay Miner.*, 1-9 (2021).

Waribam, P., Jaiyen, K., Samart C., Ogawa, M., Guan G., Kongparakul, S., “MXene potassium titanate nanowire/sulfonated polyether ether ketone (SPEEK) hybrid composite proton exchange membrane for photocatalytic water splitting”, *RSC Advances*, **11**(16), 9327-9335 (2021).

Paengjun, N., Vibulyaseak, K., Ogawa, M., “Heterostructural transformation of mesoporous silica-titania hybrids”, *Sci. Rep.*, **11**(1), 1-12 (2021).

Phuekphong, A., Imwiset, K. J., Ogawa, M., “Adsorption of triclosan onto organically modified-magadiite and bentonite”. *J. Inorg. Organomet. Polym. Mater.*, **31**(5), 1902-1911 (2021).

Deepracha, S., Ayral, A., Ogawa, M., “Acceleration of the photocatalytic degradation of organics by in-situ removal of the products of degradation”, *Appl. Catal. B: Environ.*, 119705 (2021).

Deepracha, S., Atfane, L., Ayral, A., Ogawa, M., “Simple and efficient method for functionalizing photocatalytic ceramic membranes and assessment of its applicability for wastewater treatment in up-scalable membrane reactors”, *Sep. Purif. Technol.*, **262**, 118307 (2021).

## 2020 (11)

Imwiset, K.J., Ogawa, M., “Characteristics of flexible supramolecular assembly of dioleyldimethylammonium ion confined in a two dimensional nanospace studied by the host-guest reactions”, *Colloids Surf. A: Physicochem. Eng. Asp.*, **605**, 125352 (2020).

Saito, K., Morita, K., Ogawa, M., “Preparation of a Chitin/Clay Hybrid Film by a Mechanochemical Method”, *ACS Appl. Polym. Mater.*, **11**, 4733 (2020).

Phuekphong, A.F., Imwiset, K.J., Ogawa, M., “Organically modified bentonite as an efficient and reusable adsorbent for triclosan removal from water”, *Langmuir*, **36** (31), 9025-9034 (2020).

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### **Selected Invited lectures (2014-2023)**

Ogawa, M. "Surface modification of functional particles with silica", 16<sup>th</sup> Eurasia Conference on Chemical Sciences 2023, Dec 13-Dec 15, 2023, The Berkeley Hotel Pratunam, Bangkok, Thailand.

Phuekphong, A., Hayakawa, T. and Ogawa, M. "An iron-containing layered clay mineral for photocatalytic H<sub>2</sub> evolution from water", International Conference on Materials and Systems for Sustainability (ICMaSS2023), Dec 1- Dec 3, 2023, Nagoya University, Nagoya, Japan.

Ogawa, M. "Functional Geo-materials and Bio-geo Hybrids", MANA International Symposium, 9-10<sup>th</sup>, 2023, National Institute for Materials Science (NIMS), Tsukuba, Japan.

Wijitwongwan, R. and Ogawa, M. "Compositional Variation of Layered Double Hydroxides", International Conference on Functional Layered Nanomaterials, 3-4<sup>th</sup> November 2023, Shimane University, Matsue, Japan.

Phuekphong, A., Saengdet, P. and Ogawa, M. "Preparation and possible function of bio-geo hybrids", Japan-Thailand Bilateral Symposium of "Advanced Materials for Sustainable Society Symposium II, Oct 9-Oct 10 2023, Chulalongkorn University, Bangkok, Thailand.

Ogawa, M. "Function of intercalation compounds in water", The 74<sup>th</sup> Divisional Meeting of Division of Colloid and Surface Chemistry, Sep 12-Sep 15, 2023, Shinshu University, Nagano, Japan.

Ogawa, M. "Reaction of Silane Coupling Reagent on the Surface of Functional Particles", The 10th European Silicon Days, 10-12 July 2023, Montpellier, France.

Ogawa, M. "Biopolymers and biohybrids for versatile application", Bioprocess Engineering and Bio-based Material Research Symposium, Aug 16, 2023, Pathumwan Princess University, Bangkok, Thailand.

Ogawa, M. "Designing nanoarchitecture based on the layered silicates as building block for environmental remediation", International Symposium on Inorganic and Environmental Materials, Jun 19- Jun 23, 2023, ENSC-Montpellier, France.

(Plenary) Ogawa M. "Designed structure and functions of the hybrids between smectites and water-soluble polymer", The XXXIX Scientific Meeting of the Spanish Mineralogical Society (SEM) and the XXVI Scientific Meeting of the Spanish Clay Society (SEA), June 30-July 1, 2022, Baeza, Spain.

Ogawa M. "Photoluminescence Mechanochromism of Gelatine-Clay Nanocomposite Hydrogel", 13<sup>th</sup> International Gel Symposium, 2-4 September, 2022, Tomamu, Hokkaido.

Makoto Ogawa and Akihiro Kudo "Heterogeneous photocatalysts based on nanospace materials" 第 26 回シンポジウム「光触媒反応の最近の展開, 2020 度 東京理科大学 光触媒研究推進拠点 成果報告会, 3 March 2022

Ogawa M., "Functions of clay based coatings" International symposium on "Chemical design of functional coating and interface; self-healing, anti-corrosion, anti-fouling, self-cleaning and nanocomposites", Thailand, online, 19 January 2022

Ogawa M., "Fundamentals and materials chemistry of titanium dioxides", Titanium dioxides and related materials for energy and environment 1 (NSTDA Lecture series) Thailand, online, 7 October 2021

Ogawa, M., "Silica Deposition On Functional Particles", The 19th International Symposium on Silicone Chemistry (ISOS-2021), Toulouse, 5-7 July 2021

小川 誠 "シリカ系ナノ構造の表面修飾とシリカ系ナノ材料による表面修飾" テロ界面制御会第 5 回研究会「ヘテロ接合機 材料の最新研究動向」2021 年 6 月 25 日東京 オンライン

Ogawa, M. "Heterogeneous photocatalysts based on nanospace materials", The 30th TICChE Conference (TICChE2021)-The Thai Institute of chemical engineering and applied chemistry, Thailand (Online), 6 May 2021

Ogawa, M., Application of smectite-water soluble polymer interactions, 261st ACS National Meeting & Exposition, USA (Online), 5-16 April 2021

Keynote lecture "Template syntheses of titania nanoparticles" International Conference on Materials and Systems for Sustainability (ICMaSS) 2019, Nagoya, Japan, 1 –3 November 2019

Invited lecture "Nanospace Materials for the Collection and the Decomposition of Target Species in Water, The 13th Pacific Rim Conference of Ceramic Societies (PACRIM13), Okinawa Convention Center, Japan, 27 October – 1 November 2019

Keynote lecture “Template syntheses of titania nanoparticles in a mesoporous silica” at 2019 International Conference on Nanospace Materials-Nanoarchitects in Nanospace Materials, The University of Queensland, Australia, 1-4 October 2019

Invited lecture “Characterization of titania nanoparticles in a mesoporous silica (SBA-15)” at International Symposium on Advanced Catalysis and Material Science -7th international symposium of Institute for Catalysis at Institute of catalysis, Hokkaido University, Japan, 31 July 2019

Invited lecture “Hybridization of titania with clay minerals as photocatalysts” at Euroclay 2019, Sorbonne University, 1-4 July 2019

Keynote lecture “Adsorption onto nanospace materials; for environmental application and materials’ design” at Japan Adsorption 2019, International Conference Hall, Makuhari Messe, Chiba, Japan, 22-23 May 2019

Invited seminar “Nanomaterials; preparation and application” at ULVAC seminar, Le Meridian Hotel, 26 April 2019

Invited lecture “Photochemical Reactions in Nanospaces, Possible effects of Nano Confinements” at The 2nd International Symposium on Chemistry of Nanomaterials, National Institute for Materials Science, Tsukuba, Japan, 28-29 March 2019

Invited lecture “Surface design of functional nanoparticles” at JAIST world conference 2019, Japan Advanced Institute of Science and Technology, Japan, 28 February - 1 March 2019

Invited lecture “Precise Nanostructural Design of Titania” at Taiwan-Nippon IEM Meeting, National Taiwan University, Taiwan, 17-19 February 2019

Invited lecture “Nanostructural Design of Titania” at iCeMS seminar, Kyoto University, 15 February 2019

Invited lecture “Photofunctions of hybrids based on nanospace materials and dyes at Kyutech-VISTEC workshop”, Kyushu Institute of Technology, 16 December 2018

Invited lecture “Surface Modification of Functional Particles by Silica and Titania Coating” at France-Japan Workshop 2018 on Functional Nanomaterials and Soft, University Paris Sud, Paris, France, 11-13 November 2018

Invited seminar “Deposition of Porous Silica Layer on Functional Particle” at IMaSS Seminar, IMaSS Nagoya University, Japan, 2-21 November 2018

Invited lecture “Deposition of Porous Silica Layer on Functional Particle” at The 3rd Taiwan-Japan Workshop on Nanospace Material, National Taiwan University, Taiwan, 28-30 October 2018

Invited lecture “Photocatalysts based on nano space materials” at Mahidol University, 2 October 2018

Keynote lecture “Photoinduced adsorption/desorption of photochromic molecules in host-guest systems” at The 3rd International Conference on Nanomaterials for Health, Energy and the Environment, Australia, September 2018

Keynote lecture “Host-guest chemistry of nano space materials from immobilization to diffusion” at The 2nd Symposium for A3 Foresight Program on Organic/Inorganic Nanohybrid Platforms for Precision Tumor Imaging and Therapy, Korea, September 2018

Keynote lecture “Host-guest chemistry of nanospace materials from immobilization to diffusion” at ICNN5, Japan, 22-30 August 2017

Invited lecture “Thin coating of titania and silica on particle”, at iCeMS Retreat 2017, Japan

Keynote lecture “Deposition of Silica and Titania on Functional Particles” at PPC & PETROMAT Symposium 2018, Bangkok

Keynote lecture “Application of inorganic-organic interactions for materials' design” at The 4th International Symposium for Green-Innovation Polymers (GRIP2017), JAIST, Japan

Keynote lecture “Deposition of Silica and Titania Layer on Particle Surface” at ESE symposium 2017, VISTEC

Key note lecture, Makoto Ogawa, “Photocatalysts based on nano space materials” 1st MRS Thailand International Conference, Chiang Mai, Thailand, 31 October – 3 November 2017

Plenary lecture, Makoto Ogawa, “Photocatalyst application of nanosheet materials”, Workshop on layered materials, Czech, 1-5 September 2017

Makoto Ogawa, “Hierarchical design of photofunctional host-guest complexes derived from nanospace materials”, 21<sup>st</sup> International Symposium on Advance Display Materials & Devices”, Nagoya, Japan, July 2017

Keynote Lecture, Makoto Ogawa, “Application of Purified bentonite and synthetic smectites”, 16<sup>th</sup> International Clay Conference”, Granada, Spain, July 2017

Makoto Ogawa, “Nanospace Materials and Application”, BUU Chemical Engineering Graduate Student Seminar Series, Burapha University, Thailand, 19 June 2017

Makoto Ogawa, “Nanomaterials design for tuning lights into desired colors”, Materials Resaerch Center Seminar, Khon Kaen University, 5 May 2017

Makoto Ogawa, “Purification of bentonites” Pure and Applied Chemistry International Conference 2017 (PACCON2017), Bangkok, Thailand, 2-3 February 2017

Makoto Ogawa, “Interactions of nanoparticles with layered solids”, The 10<sup>th</sup> International Conference on Multi-functional Materials and Applications, Khon Kaen University, Thailand, 1-3 December 2016

Makoto Ogawa, “Possibility and problems in the application of layered materials for water purification”, Kick Off meeting of Water Remediation project, Ceramic Society of Japan, Tokyo, Japan, 23 November 2016

Makoto Ogawa, “Preparation of Layered Double Hydroxides”, International Symposium on Chemistry of Layered Double Hydroxides and Related Layered Solids, AICS Tower, Nagano (Engineering) Campus, Shinshu University, Japan, 14 October 2016

Makoto Ogawa, “Host-guest chemistry of low-dimensional nanospace materials from immobilization to spatial distribution and diffusion”, The MANA Seminar to be held at International Center for Materials Nanoarchitectonics (MANA), Tsukuba, Japan, 13 October 2016

Makoto Ogawa, “Photocatalyst application of nanosheet materials” PERCH-CIC Congress IX, Pattaya, Thailand, 26-29 June 2016

Makoto Ogawa, “Application of Bentonite” The 1st FIT-ME Symposium -- Chemistry and Applications of Inorganic Layered Materials -- Fukuoka Institute of Technology, Japan, 16 May 2016

Makoto Ogawa, “Host-guest reactions of Low-Dimensional Nanospace Materials” Pure and Applied Chemistry International Conference 2016 (PACCON2016), Bangkok, Thailand, 9-11 February 2016

Makoto Ogawa, “The spatial distribution of guest in low-dimensional nanospace materials” 251<sup>st</sup> ACS National Meeting & Exposition, San Diego, 13-17 March 2016

Makoto Ogawa, Morphosyntheses of Layered Double Hydroxides, Kyutech–Vistec Joint Workshop on Nanosheets and Related Materials. Kitakyushu, 9 January 2016

Makoto Ogawa, ”Host-guest chemistry of nanospace materials” The International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, USA, 15-20 December 2015

Makoto Ogawa “Clay minerals as natural nano-materials with a wide range of industrial and scientific applications”, The 5<sup>th</sup> International Conference on Science and Social Science 2015; Research and Innovation for Community and Regional Development, Maha Sarakham, Thailand, 17-18 September 2015

Key Note: Makoto Ogawa, “Preparation of mesoporous silicas and host-guest chemistry; Toward precise hierarchical design of the nanostructure and morphology” 2015 International Conference on Nanospace Materials, Taipei, Taiwan

Key Note: Makoto Ogawa, “Host-guest chemistry in nanospace materials (in Japanese), AIST academic seminar on “Hybrid Materials”, Tokyo, Japan, 17 July 2015

Makoto Ogawa, “Host-guest reactions of Low-Dimensional Nanospace Materials” Annual Meeting of Chemical Society of Japan, Tokyo, 22 March 2015

Makoto Ogawa, “Host-guest chemistry of layered and mesoporous materials”, Pure and Applied Chemistry International Conference 2015 (PACCON2015), Bangkok, Thailand, 17-19 February 2015

Makoto Ogawa “Applications of nanomaterials for environmental problems“, Sciences and Social Sciences: Integrated Creative Research for Local Development toward the ASEAN Economic Community, Maha Sarakham, Thailand, 18-19 September 2014

Makoto Ogawa “Molecular Recognition on Nanospace Materials” The 15th IUMRS-International Conference in Asia (IUMRS-ICA 2014), Fukuoka University, Fukuoka, Japan, 24-30 August 2014

Makoto Ogawa, “Preciselly controlled deposition of silica layer on nanoparticle surface,” E-MRS, Lille, France, 26 May 2014

Makoto Ogawa, “Possible roles of the surface modification on the incorporation of nanoparticles into polymers”, International Symposium for Green-Innovation Polymers (GRIP2014) & The 13th Symposium of the Research Center for Highly Environmental and Recyclable Polymers, Kanazawa, 6-7 March 2014

Makoto Ogawa “Deposition of Nanoporous Silica Layer on Nanoparticle” Pure and Applied Chemistry International Conference 2014 (PACCON2014), Centara Hotel and Convention Centre, Khon Kaen, Thailand, 8 January 2014

### Other invited seminars

University Munich, Stockholm University, YKI (Stockholm), Max Planck Institute (Mulheim), University of Trondheim (Norway), University of Paris, University of Montpellier II, CNRS Orlean, Saint-Gobain (France), University of Sassari (Italy), Autonoma University (Madrid), Seoul National University (Seoul, Korea), Ehwa Womans University (Seoul, Korea), Khon Kaen University (Thailand), Hokkaido University (Japan), Hiroshima University (Japan), Shimane University (Japan), AIST (Tsukuba, Japan), NIMS (Tsukuba, Japan), Nagoya University (Japan), Nagoya Institute of Technology (Nagoya, Japan), University of Calgary (Canada), Chiang Mai University (Thailand), Kyoto University (Japan), Osaka University (Japan), Chuo University (Japan), Mahidol University (Thailand), KMITL (Thailand), National Chia Tong University (Taiwan), Khon Kaen University (Thailand), Naresuan University (Thailand), Silapakorn University(Thailand), Chiag Mai University (Thailand), Tokyo University of Science (Japan).