

CURRICULUM VITAE

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DATE OF BIRTH 1/27/1975

EDUCATION

Osaka University	Ph.D. in Macromolecular Science	3/2002
Dissertation Title; Metal–Oxygen Bond Regulation by Rearrangement of Hydrogen Bonding Networks		
Osaka University	M.S. in Macromolecular Science	3/1999
Osaka University	B.S. in Macromolecular Science	3/1997

PROFESSIONAL EXPERIENCE

Professor

Section of Environmental Materials Science, Faculty of Environmental Earth Science, Hokkaido University	Department of Applied Chemistry,	4/2020–present
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Associate Professor

Department of Applied Chemistry, Graduate School of Engineering, Osaka University		4/2013–3/2020
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Assistant Professor

Frontier Research Base for Global Young Researchers, Graduate School of Engineering, Osaka University		4/2008–3/2013
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Department of Applied Chemistry, Graduate School of Engineering, Osaka University		4/2008–3/2013
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- Research Associate** 4/2007–3/2008
JSPS (Japan Society of the Promotion of Science) fellow Abroad
Departments of Molecular Biology and Chemistry,
The Scripps Research Institute
- Assistant Professor** 4/2003–3/2007
Department of Chemistry, Faculty of Science
Tokyo University of Science
- Postdoctoral Research Fellow** 4/2002–3/2003
JSPS (Japan Society of the Promotion of Science) fellow (PD)
Department of Earth and Space Science, Graduate School of Science
Osaka University
- JSPS (Japan Society of the Promotion of Science) fellow (DC1)** 4/1999–3/2002
Department of Macromolecular Science, Graduate School of Science
Osaka University

RESEARCH FIELDS

Bioinorganic Chemistry, Metalloprotein Engineering, Nanobiotechnology, Macromolecular Science, Chemical Biology

PUBLICATIONS

1. “Directed Evolution of a Cp*Rh^{III}-Linked Biohybrid Catalyst Based on a Screening Platform with Affinity Purification”
S. Kato, A. Onoda,* N. Taniguchi, U. Schwaneberg, T. Hayashi*
ChemBioChem, 22, in press. (2020).
2. “Chiral Paddle-wheel Diruthenium Complexes for Asymmetric Catalysis”
T. Miyazawa, T. Suzuki, T. Kumagai, K. Takizawa, T. Kikuchi, S. Kato, A. Onoda, A. T. Hayashi, Y. Kamei, F. Kamiyama, M. Anada, M. Kojima, T. Yoshino, S. Matsunaga*
Nature Catal. in press. (2020). DOI: 10.1038/s41929-020-00513-w.
3. “Incorporation of a Cp*Rh(III)-dithiophosphate Cofactor with Latent Activity into a Protein Scaffold Generates a Biohybrid Catalyst Promoting C(sp²)-H Bond Functionalization”
S. Kato, A. Onoda,* A. R. Grimm, K. Tachikawa, U. Schwaneberg, T. Hayashi*
Inorg. Chem., 59, 14457–14463. (2020). DOI: 10.1021/acs.inorgchem.0c02245
4. “Triazolecarbaldehyde Reagents for One-step N-Terminal Protein Modification”
A. Onoda,* N. Inoue, E. Sumiyoshi, T. Hayashi*
ChemBioChem, 21, 1274–1278 (2020). **Front Cover**. DOI: 10.1002/cbic.201900692
5. “Site-specific Modification of Proteins through N-terminal Azide-labeling and a Chelation-assisted CuAAC Reaction”
N. Inoue, A. Onoda,* T. Hayashi*
Bioconjugate Chem., 30, 2427–2434 (2019). DOI: 10.1021/acs.bioconjchem.9b00515
6. “Hemoproteins Reconstituted with Artificial Metal Complexes as Biohybrid Catalysts”
K. Oohora, A. Onoda, T. Hayashi*

- Acc. Chem. Res.*, 52, 945–954 (2019). DOI: 10.1021/acs.accounts.8b00676
7. “A Heterogeneous Hydrogen - Evolution Catalyst Based on a Mesoporous Organosilica with a Diiron Catalytic Center Modelling [FeFe]-Hydrogenase”
T. Himiyama, M. Waki, D. Esquivel, **A. Onoda**, T. Hayashi, P. Van Der Voort, S. Inagaki*
ChemCatChem, 10, 4894–4899 (2018). DOI: 10.1002/cctc.201801257
 8. “Cavity Size Engineering of a β -Barrel Protein Generates Efficient Biohybrid Catalysts for Olefin Metathesis”
A. R. Grimm, D. F. Sauer, M. D. Davari, L. Zhu, M. Bocola, S. Kato, **A. Onoda**, T. Hayashi, J. Okuda,* U. Schwaneberg*
ACS Catal., 8, 3358–3364 (2018). DOI: 10.1021/acscatal.7b03652.
 9. “A Water-Soluble Supramolecular Complex that Mimics the Heme/Copper Hetero-Binuclear Site of Cytochrome *c* Oxidase”
H. Kitagishi,* Daiki Shimoji, T. Ohta, **A. Onoda**, T. Hayashi, J. Weiss, K. Kano
Chem. Sci., 9, 1989–1995 (2018). DOI: 10.1039/C7SC04732K.
 10. “Bimetallic M/N/C Catalysts Prepared from π -Expanded Metal Salen Precursors toward an Efficient Oxygen Reduction Reaction”
A. Onoda,* Y. Tanaka, K. Matsumoto, M. Ito, T. Sakata, H. Yasuda, T. Hayashi*
RSC Adv., 8, 2892–2899 (2018). DOI: 10.1039/c7ra12657c.
 11. “Nonprecious-metal Fe/N/C Catalysts Prepared from π -Expanded Fe Salen Precursors toward an Efficient Oxygen Reduction Reaction”
Y. Tanaka, **A. Onoda**,* S. Okuoka, T. Kitano, K. Matsumoto, T. Sakata, H. Yasuda, T. Hayashi*
ChemCatChem, 9, 743–750 (2018). **Front Cover**. DOI: 10.1002/cctc.201701629.
 12. “Mitochondrial-targeting Polyamine–Protoporphyrin Conjugates for Photodynamic Therapy”
F. Taba, **A. Onoda**,* U. Hasegawa, T. Enoki, T. Ooyama, J. Ohshita, T. Hayashi*
ChemMedChem, 12, 15–18. (2018). **Front Cover**. DOI: 10.1002/cmdc.201700467.
 13. “Cofactor-specific Anchoring of Horseradish Peroxidase onto a Polythiophene-modified Electrode”
A. Onoda,* Y. Umeda, T. Hayashi*
Chem. Lett., 46, 1807–1809 (2017). DOI: 10.1246/cl.170837.
 14. “A Pyrene-linked Cavity within a β -Barrel Protein Promotes an Asymmetric Diels-Alder Reaction”
T. Himiyama, N. Taniguchi, S. Kato, **A. Onoda**,* T. Hayashi*
Angew. Chem. Int. Ed., 56, 13618–13622 (2017). **Front Cover**. DOI: 10.1002/anie.201704524.
 15. “Interdomain Flip-flop Motion Visualized in Flavocytochrome Cellobiose Dehydrogenase Using High-speed Atomic Force Microscopy during Catalysis”
H. Harada, **A. Onoda**,* T. Uchihashi,* H. Watanabe, N. Sunagawa, M. Samejima, K. Igarashi,* T. Hayashi*
Chem. Sci., 8, 6561–6565 (2017). DOI: 10.1039/C7SC01672G
 16. “Enhanced Visible Light Response of a WO₃ Photoelectrode with an Immobilized Fibrous Gold Nanoparticle Assembly Using an Amyloid- β Peptide”
A. Onoda,* H. Harada, T. Uematsu, S. Kuwabata, R. Yamanaka, S. Sakurai, T. Hayashi*
RSC Adv., 7, 1089–1092 (2017) DOI: 10.1039/C6RA26916H.
 17. “A Supramolecular Assembly Based on an Engineered Hemoprotein Exhibiting a Thermal Stimulus-driven Conversion to a New Distinct Supramolecular Structure”
K. Oohora, Y. Oonuma, Y. Tanaka, **A. Onoda**, T. Hayashi*
Chem. Commun., 53, 6879–6882 (2017). DOI: 10.1039/C7CC02678A.
 18. “*in situ* Observation of Enhanced Photoinduced Charge Separation in a Gold Nanoparticle Assembly Immobilized on TiO₂”
H. Harada, **A. Onoda**,* S. Moriguchi, T. Hayashi*
ChemistrySelect, 1, 5666–5670 (2016). **Inside Front Cover**. DOI: 10.1002/slct.201601383.

19. "Cofactor-specific Covalent Anchoring of Cytochrome *b*₅₆₂ on Single-walled Carbon Nanotube by Click Chemistry"
A. Onoda,* N. Inoue, S. Campidelli, T. Hayashi*
RSC Adv., 6, 65936–65940 (2016). DOI: 10.1039/C6RA14195A.
20. "Photocatalytic Properties of TiO₂ Composites Immobilized with Gold Nanoparticle Assemblies Using the Streptavidin–Biotin Interaction"
H. Harada, **A. Onoda**,* T. Uematsu, S. Kuwabata, T. Hayashi*
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21. "Artificial Diels-Alderase Based on the Transmembrane Protein FhuA"
H. Osseili, D. F. Sauer, K. Beckerle, M. Arlt, T. Himiyama, T. Polen, **A. Onoda**, U. Schwaneberg, T. Hayashi, J. Okuda*
Beilstein J. Org. Chem., 12, 1314–1321 (2016). DOI:10.3762/bjoc.12.124.
22. "Anchoring Cytochrome *b*₅₆₂ on a Gold Nanoparticle by a Heme–Heme Pocket Interaction"
A. Onoda,* T. Taniguchi, N. Inoue, A. Kamii, T. Hayashi*
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T. Ono, Y. Hisaoka, **A. Onoda**,* K. Oohora, T. Hayashi*
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T. Himiyama, D. F. Sauer, **A. Onoda**,* T.P. Spaniol, J. Okuda, T. Hayashi*
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25. "A Highly Active Biohybrid Catalyst for Olefin Metathesis in Water: The Impact of a Hydrophobic Cavity in a β -Barrel Protein"
D. F. Sauer, T. Himiyama, K. Tachikawa, K. Fukumoto, **A. Onoda**, E. Mizohata, T. Inoue, M. Bocola, U. Schwaneberg, T. Hayashi, J. Okuda*
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26. "*meso*-Dibenzoporphycene has a Large Bathochromic Shift and a Porphycene Framework with an Unusual *Cis* Tautomeric Form"
K. Oohora, A. Ogawa, T. Fukuda, **A. Onoda**, J. Hasegawa, T. Hayashi*
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A. Onoda,* T. Hayashi*
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29. "Generation of New Artificial Metalloproteins by Cofactor Modification of Native Hemoproteins"
T. Hayashi,* **A. Onoda**, Y. Sano
Israel J. Chem., 55, 76–84 (2015). DOI: 10.1002/ijch.201400123
30. "Enzyme-substrate Complex Structures of CYP154C5 Shed Light on its Mode of Highly Selective Steroid Hydroxylation"
K. Herzog, P. Bracco, **A. Onoda**, T. Hayashi, K. Hoffmann, A. Schallmeyer
Acta Crystallogr. Sect. D., 2875–2889 (2014). DOI :10.1107/S1399004714019129.
31. "Photoinduced Hydrogen Evolution Catalyzed by a Synthetic Diiron Dithiolate Complex Embedded within a Protein Matrix"
A. Onoda,* Y. Kihara, K. Fukumoto, Y. Sano, T. Hayashi*

- ACS Catal.*, 4, 2645–2648 (2014). DOI: 10.1021/cs500392e.
32. “Photochemical Property of Myoglobin–CdTe Quantum Dot Conjugate Formed by Supramolecular Host–guest Interaction”
T. Himiyama, **A. Onoda**,* T. Hayashi*
Chem. Lett., 43, 1152–1154 (2014). DOI: 10.1246/cl.140321.
 33. “Fabrication of enzyme-degradable and size-controlled protein nanowires using single particle nano-fabrication technique”
M. Omichi, A. Asano, S. Tsukuda, K. Takano, M. Sugimoto, A. Saeki, D. Sakamaki, **A. Onoda**, T. Hayashi, S. Seki*
Nature Commun., 5, 3718 (2014). DOI: 10.1038/ncomms4718.
 34. “A Rhodium Complex-linked Hybrid Biocatalyst: Stereo-controlled Phenylacetylene Polymerization within an Engineered Protein Cavity”
K. Fukumoto, **A. Onoda**, E. Mizohata, M. Bocola, T. Inoue, U. Schwaneberg, T. Hayashi*
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 35. “H₂O₂-dependent Substrate Oxidation by an Engineered Diiron Site in a Bacterial Hemerythrin”
Y. Okamoto, **A. Onoda**,* H. Sugimoto, Y. Takano, S. Hirota, D. M. Kurtz, Jr., Y. Shiro, T. Hayashi*
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 36. “Crystal Structure, Exogenous Ligand Binding and Redox Properties of an Engineered Diiron Active Site in a Bacterial Hemerythrin”
Y. Okamoto, **A. Onoda**,* H. Sugimoto, Y. Takano, S. Hirota, D. M. Kurtz, Jr., Y. Shiro, T. Hayashi*
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 37. “Cathodic Photocurrent Generation from Zinc-substituted Cytochrome *b*₅₆₂ Assemblies Immobilized on an Apocytochrome *b*₅₆₂-modified Gold Electrode”
A. Onoda,* Y. Kakikura, T. Hayashi*
Dalton Trans., 42, 16102–16107 (2013). DOI: 10.1039/C3DT51469B
 38. “Supramolecular Linear Assemblies of Cytochrome *b*₅₆₂ Immobilized on a Gold Electrode”
Y. Kakikura, **A. Onoda**,* E. Kubo, H. Kitagishi, T. Uematsu, S. Kuwabata, T. Hayashi*
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 39. “Supramolecular Assembling Systems Formed by Heme–heme Pocket Interactions in Hemoproteins”
K. Oohora, **A. Onoda**, T. Hayashi*
Chem. Commun., 48, 11714–11726 (2012). DOI: 10.1039/C2CC36376C
 40. “Photocurrent Generation of Hierarchical Zinc-substituted Hemoprotein Assemblies Immobilized on a Gold Electrode”
A. Onoda, Y. Kakikura, T. Uematsu, S. Kuwabata, T. Hayashi*
Angew. Chem. Int. Ed., 51, 2628–2631 (2012). **Hot Paper**. DOI: 10.1002/anie.201107067
 41. “Chemically Programmed Supramolecular Assembly of Hemoprotein and Streptavidin with Alternating Alignment”
K. Oohora, S. Burazerovic, **A. Onoda**, Y. M. Wilson, T. R. Ward, T. Hayashi*
Angew. Chem. Int. Ed., 51, 3818–3821 (2012). **Front Cover**. DOI: 10.1002/anie.201105186
 42. “A Rhodium Complex-Linked β -Barrel Protein as a Hybrid Biocatalyst for Phenylacetylene Polymerization”
A. Onoda, K. Fukumoto, M. Arlt, M. Bocola, U. Schwaneberg, T. Hayashi*
Chem. Commun., 48, 9756–9758 (2012).
 43. “Photochemical Properties of a Myoglobin–CdTe Quantum Dot Conjugate”
A. Onoda, T. Himiyama, K. Ohkubo, S. Fukuzumi, T. Hayashi*
Chem. Commun., 48, 8054–8056 (2012). **Inside Front Cover**. DOI: 10.1039/C2CC33046F

44. "Fibrous Supramolecular Hemoprotein Assemblies Connected with Synthetic Heme Dimer and Apohemoprotein Dimer"
A. Onoda, A. Takahashi, K. Oohora, Y. Onuma, T. Hayashi*
Chemistry & Biodiversity, 9, 1689–1692 (2012). DOI: 10.1002/cbdv.201100434
45. "Photocatalytic Hydrogen Evolution by a Diiron Hydrogenase Model Based on a Peptide Fragment of Cytochrome *c*556 with an Attached Diiron Carbonyl Cluster and an Attached Ruthenium Photosensitizer"
Y. Sano, **A. Onoda**, T. Hayashi*
J. Inorg. Biochem., 105, 159–162 (2012). DOI: 10.1016/j.jinorgbio.2011.07.010
46. "Crystal Structure and Spectroscopic Studies of a Stable Mixed-Valent State of the Hemerythrin-like Domain of a Bacterial Chemotaxis Protein"
A. Onoda,* Y. Okamoto, H. Sugimoto, Y. Shiro, T. Hayashi*
Inorg. Chem., 50, 4892–4899 (2011). DOI:10.1021/ic2001267
47. "A Hydrogenase Model System Based on the Sequence of Cytochrome *c*: Photochemical Hydrogen Evolution in Aqueous Media"
Y. Sano, **A. Onoda**, T. Hayashi*
Chem. Commun., 47, 8229–8231 (2011). **Inside Front Cover**. DOI:10.1039/C1CC11157D
48. "A Chemically-controlled Supramolecular Protein Polymer Formed by a Myoglobin-based Self-assembly System"
K. Oohora, **A. Onoda**, H. Kitagishi, H. Yamaguchi, A. Harada, T. Hayashi*
Chem. Sci., 2, 1033–1038 (2011). **Backside Cover**. DOI:10.1039/C1SC00084E
49. "Preparation and Reactivity of a Tetranuclear Fe(II) Core in the Metallothionein α -Domain"
Y. Sano, **A. Onoda**, R. Sakurai, H. Kitagishi, T. Hayashi*
J. Inorg. Biochem., 105, 702–708 (2011). DOI: 10.1016/j.jinorgbio.2011.01.011
50. "Supramolecular Hemoprotein–Gold Nanoparticle Conjugates"
A. Onoda, Y. Ueya, T. Sakamoto, T. Uematsu, T. Hayashi*
Chem. Commun., 46, 9107–9109 (2010). **Front Cover**. DOI: 10.1039/C0CC03430D
51. "DNA-binding Hemoproteins Tethering Polyamine Interface"
A. Onoda, H. Nagai, S. Koga, T. Hayashi*
Bull. Chem. Soc. Jpn., 83, 375–377 (2010). DOI:10.1246/bcsj.20090315
52. "Supramolecular Protein–Protein Complexation via Specific Interaction Between Glycosylated Myoglobin and Sugar-binding Protein"
H. Nagai, **A. Onoda**, T. Matsuo, T. Hayashi*
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53. "Alignment of Gold Clusters on DNA via a DNA-recognizing Zinc Finger–Metallothionein Fusion Protein"
S. Ariyasu, **A. Onoda**, R. Sakamoto, T. Yamamura*
Bioconjugate Chem., 20, 2278–2285 (2009). DOI: 10.1021/bc9002713
54. "Minimal Motif Peptide Structure of Metzincin Clan Zinc Peptidases in Micelles"
A. Onoda, T. Suzuki, H. Ishizuka, R. Sugiyama, S. Ariyasu, T. Yamamura*
J. Pep. Sci., 15, 832–841 (2009). DOI: 10.1002/psc.1184
55. "Porphyrin Arrays Responsive to Additives. Fluorescence Tuning"
T. Yamamura,* S. Suzuki, T. Taguchi, **A. Onoda**, T. Kamachi, I. Okura
J. Am. Chem. Soc., 131, 11719–11726 (2009). DOI: 10.1021/ja809851d
56. "Circular Dichroism of Neutral Zinc Porphyrin–Oligonucleotide Conjugates Modified with Flexible Linker"
A. Onoda, M. Igarashi, S. Naganawa, K. Sasaki, S. Ariyasu, T. Yamamura*
Bull. Chem. Soc. Jpn., 82, 12880–12886 (2009).

57. "Conjugation of Au₁₁ Cluster with Cys-rich Peptides Containing the α -domain of Metallothionein"
S. Ariyasu, **A. Onoda**, R. Sakamoto, T. Yamamura*
Dalton Trans., 21, 3742–3747 (2009).
58. "Inorganic-Organic Calcium Carbonate Composite of Synthetic Polymer Ligands with an Intramolecular NH \cdots O Hydrogen Bonds"
N. Ueyama,* K. Takahashi, **A. Onoda**, T. Okamura, H. Yamamoto
Top. Curr. Chem., 271, 155–193 (2007).
59. "Photoinduced Switching of Intramolecular Hydrogen Bond between Amide NH and Carboxyl Oxygen"
T. Matsuhira, H. Yamamoto, **A. Onoda**, T. Okamura, N. Ueyama*
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60. "Calcium Ion Responsive DNA Binding in Zinc Finger Fusion Protein"
A. Onoda, N. Arai, N. Shimazu, H. Yamamoto, T. Yamamura*
J. Am. Chem. Soc., 127, 16535–16540 (2005).
61. "Covalent Immobilization of Metal-binding Motifs of Enzymes on Quartz Surface. [Ni(Cys-X₂-Cys)₂]²⁻ of Hydrogenases."
D. Sakaniwa, T. Ohe, T. Misumi, H. Monjushiro, **A. Onoda**, T. Yamamura*
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62. "Switching of Turn Conformation in an Aspartate Anion Peptide Fragment by NH \cdots O Hydrogen Bonds"
A. Onoda, H. Yamamoto, Y. Yamada, K. Lee, S. Adachi, T. Okamura, K.-Y. Kumagaye, K. Nakajima, T. Kawakami, S. Aimoto, N. Ueyama*
Biopolymers (Peptide Science), 80, 233–248 (2005).
63. "Proton-Driven Conformational Switch of Cyclohexyl Skeleton Coupling with NH \cdots O Hydrogen Bond Formation"
A. Onoda, H. Haruna, H. Yamamoto, K. Takahashi, H. Kozuki, T. Okamura, N. Ueyama*
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64. "Structures and Properties of Octaethylporphinato(phenolate)iron(III) Complexes With NH \cdots O Hydrogen Bonds: Modulation of Fe–O Bond Character by the Hydrogen Bond"
D. Kanamori, Y. Yamada, **A. Onoda**, T. Okamura, S. Adachi, H. Yamamoto, N. Ueyama*
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A. Onoda, T. Okamura, H. Yamamoto, N. Ueyama*
Acta Crystallogr. E, E60, m1196–m1198 (2004).
66. "Stabilization of Calcium- and Terbium-Carboxylate Bonds by NH \cdots O Hydrogen Bonds in Mononuclear Complex: A Functional Model of the Active Site of Calcium Binding Proteins"
A. Onoda, Y. Yamada, Y. Nakayama, H. Adachi, T. Okamura, A. Nakamura, H. Yamamoto, N. Ueyama, D. Vyprachticky, Y. Okamoto*
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67. "Highly Oriented Aragonite Nanocrystal-biopolymer Composites in an Aragonite Brick of the Nacreous Layer of *Pinctada fucata*."
K. Takahashi, H. Yamamoto, **A. Onoda**, M. Doi, T. Inaba, M. Chiba, A. Kobayashi, T. Taguchi, T. Okamura, N. Ueyama*
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68. "Stabilization of Carboxylate Anion with NH \cdots O Hydrogen Bond: Facilitation of the Deprotonation of Carboxylic Acid by the Neighboring Amide NH Groups"
A. Onoda, Y. Yamada, J. Takeda, Y. Nakayama, T. Okamura, M. Doi, H. Yamamoto, N. Ueyama*

- Bull. Chem. Soc. Jpn.*, 77, 321–329 (2004).
69. “Solid State ^{31}P MAS NMR Detection of Hydrogen-Bonded Phosphate Polymer in Calcium-Phosphate Composites”
A. Onoda, M. Doi, K. Takahashi, T. Okamura, H. Yamamoto, H. Ueyama*
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70. “Formation of 6-, 7- or 8- Membered Ring Intra-side-chain $\text{NH}\cdots\text{O}$ Hydrogen Bond Toward Ca-binding”
K. Takahashi, M. Doi, A. Kobayashi, T. Taguchi, **A. Onoda**, T. Okamura, H. Yamamoto, N. Ueyama*
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71. “Direct Observation of Polymer-Binding Site on Calcite Crystal by FE/SEM: Regulation of Binding Abilities by a Rotation of Amide Group in Poly(carboxylate) to CaCO_3 Crystals”
K. Takahashi, M. Doi, A. Kobayashi, T. Taguchi, **A. Onoda**, T. Okamura, H. Yamamoto, N. Ueyama*
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A. Onoda, T. Okamura, H. Yamamoto, N. Ueyama*
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73. “Distorted Square Planar Pd(II) Complex with Shortened Pd–Cl Bond Induced by Bulky Terpyridyl Ligand, 6,6'-Dimesityl-2,2':6',2''-terpyridine”
A. Onoda, K. Kawakita, T. Okamura, T. Yamamoto, N. Ueyama*
Acta Crystallogr. E, E59, m291–m293 (2003).
74. “(Acetonitrile)(6,6'-dimesityl-2,2':6',2''-terpyridine) Copper(I) Hexafluorophosphate”
A. Onoda, K. Kawakita, T. Okamura, T. Yamamoto, N. Ueyama*
Acta Crystallogr. E, E59, m266–m267 (2003).
75. “Synthesis of Zigzag-Chain and Cyclic-Octanuclear Calcium Complexes and Hexanuclear Bulky Aryl-Phosphate Sodium Complexes with Ortho-Amide Groups: Structural Transformation Involving a Network of Inter- and Intramolecular Hydrogen Bonds”
A. Onoda, Y. Yamada, T. Okamura, M. Doi, H. Yamamoto, N. Ueyama*
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N. Ueyama,* K. Takahashi, **A. Onoda**, T. Okamura, H. Yamamoto
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A. Onoda, Y. Yamada, T. Okamura, H. Yamamoto, N. Ueyama*
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2. “Artificially Created Metalloenzyme Consisting of an Organometallic Complex Immobilized to a Protein Matrix”
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3. “へムタンパク質の自己組織化機能を介したハイブリッド材料”
小野田晃, 林 高史
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4. “人工金属酵素”
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6. “バイオハイブリッド触媒による重合反応： β バレル型タンパク質反応場の利用”
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AWARDS

1st Incentive Award of Japan Association of Chemical Innovation, 2012

Chancellor's Incentive Award from Osaka University, 2013

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INVITED LECTURES

(International conferences and symposiums)

1. "Tailored Protein Assemblies for Hybrid Biomaterials"
Designer Biology 2019
ニューカッスル大学、ニューカッスル、2019/7/31.
2. "Tailored Protein Assemblies for Hybrid Biomaterials"
Aachen Protein Engineering Symposium (AcES)
RWTH アーヘン大学、アーヘン、2018/10/9.
3. "Hybrid Biocatalysts : A Synthetic Metal Complex Embedded within a Protein Scaffold"
A. Onoda
Japan-China Joint Interdisciplinary Symposium on Coordination-based Hybrid Material
Okazaki, 25/6/2017.
4. "Hybrid Biocatalysts : A Synthetic Metal Complex Embedded within a Protein Scaffold"
A. Onoda
Telluride Science Research Center Workshop
"Structure and Function of the Hydrogenase Mimics"
Telluride, 3/7/2015.
5. "Programmed Hemoprotein Assemblies: Functional Biomaterials and Bioelectronic Interface"
A. Onoda
Japan-Taiwan Bilateral Workshop 2014
Tainan, 13/10/2014.
6. "Linear Hemoprotein Assemblies on a Gold Surface"
A. Onoda
International Conference on Porphyrins and Phthalocyanins,
Istanbul, 27/7/2014.
7. "Hemoprotein-based Hybrid Materials as Bioelectronic Interface"
A. Onoda
International Symposium on Polymeric Materials Based on Element-blocks,
Kyoto Institute of Technology, Kyoto, 31/5/2014.
8. "Programmed Hemoprotein Assemblies as a Bioelectronic Interface"
A. Onoda
Asian International Meeting in the 94th Annual Meeting, The Chemical Society of Japan,
Nagoya University, Nagoya, 29/3/2014.
9. "Programmed Hierarchical Assemblies of Hemoproteins as Bioelectronic Interface"
A. Onoda
International Symposium of Coordination Programming,
University of Tokyo, Tokyo, 21/1/2014.

10. “Programmed Hemoprotein Assemblies as Surface Nanoarchitecture of Biodevices”
A. Onoda
Symposium on Chemistry of Coordination Architecture in the 63th Conference of Japan Society of Coordination Chemistry, University of the Ryukyus, Naha, 02/11/2013.
11. “Programmed Hierarchical Assemblies of Hemoproteins toward Functional Biodevices”
A. Onoda
Japan-China Joint Coordination Chemistry Symposium for Young Scientists on Advanced Coordination Materials, Institute of Molecular Science, Okazaki, 15/06/2013.
12. “Programmed Hemoprotein Assemblies as a Bioelectronic Interface”
A. Onoda
Japan-Taiwan Bilateral Workshop on Nano Science 2012, Osaka University, Osaka, 05/12/2012.
13. “Programmed Hemoprotein Assemblies toward Biodevices”
A. Onoda, T. Hayashi
The First International Symposium on Biofunctional Chemistry (ISBC2012), Tokyo Institute of Technology, Tokyo, 27/11/2012.
14. “Programmed Hierarchical Assemblies of Hemoproteins toward Functional Biodevices”
A. Onoda, T. Hayashi
Germany-Japan Bilateral Meeting on Coordination Programming, Tokyo, 25/10/2012.
15. “Programmed Hemoprotein Assemblies on Metal Surfaces”
A. Onoda, Y. Ueya, Y. Kakikura, T. Himiyama, T. Hayashi
Asian Conference on Coordination Chemistry, Dehli, India, 17/10/2011.
16. “Artificial Hemoprotein Assemblies Conjugated with Gold Surfaces”
A. Onoda, Y. Ueya, Y. Kakikura, A. Takahashi, K. Oohora, T. Hayashi
60th Anniversary Conference on Coordination Chemistry, Osaka, 28/9/2010.