

Curriculum Vitae

Name: Yohei Haketa

Affiliation: Department of Applied Chemistry,
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Education:

2007 B. S. Faculty of Science and Engineering, Ritsumeikan University

2009 M. S. Faculty of Science and Engineering, Ritsumeikan University

2011 Ph. D. Institute of Science and Engineering, Ritsumeikan University

April 2009 – March 2011 Research Fellow (Japan Society for the Promotion of Science)

April 2011 – March 2012 Postdoctoral Fellow (Japan Society for the Promotion of Science)

April 2012 – March 2015 Corporate Research & Development, Asahi Kasei Corporation

April 2015 – March 2017 Postdoctoral Fellow (Prof. Maeda group)

April 2017 – March 2019 Assistant Professor (Prof. Maeda group)

April 2019 – Lecturer (Prof. Maeda group)

Publication:

Original Papers

(38) "Peripheral Modifications of *meso*-Hydroxyporphyrins: Formation of π -Electronic Anions and Ion-Pairing Assemblies"

Sasano, Y.; Haketa, Y.; Tanaka, H.; Yasuda, N.; Hisaki, I.; Maeda, H.

Chem. Eur. J. **2019**, *25*, in press.

(37) "Liquid Crystals Comprising π -Electronic Ions from Porphyrin–Au^{III} Complexes"

Haketa, Y.; Bando, Y.; Sasano, Y.; Tanaka, H.; Yasuda, N.; Hisaki, I.; Maeda, H.

iScience **2019**, in press.

(36) "(TBA)"

Zhan, Y.-Y.; Kojima, T.; Ishii, K.; Takahashi, S.; Haketa, Y.; Maeda, H.; Uchiyama, S.; Hiraoka, S.

TBA in press.

(35) "Arylpyrrolyldiketone Boron Complexes Exhibiting Various Anion-Binding Modes Based on Dynamic Conformation Changes"

Kuno, A.; Fujiwara, M.; Haketa, Y.; Maeda, H.

Chem. Asian J. **2019**, *14*, in press.

- (34) "Induced-fit expansion and contraction of a self-assembled nanocube finely responding to neutral and anionic guests"
Zhan, Y.-Y.; Kojima, T.; Nakamura, T.; Takahashi, T.; Takahashi, S.; Haketa, Y.; Shoji, Y.; Maeda, H.; Fukushima, T.; Hiraoka, S.
Nature Commun. **2018**, *9*, 4530.
- (33) "Pyrrole-Based Zwitterionic π -Electronic Systems That Form Self-Assembled Dimers"
Maeda, H.; Okubo, T.; Haketa, Y.; Yasuda, N.
Chem. Eur. J. **2018**, *24*, in press.
- (32) "Induced Homeotropic Alignment of Nematic Liquid Crystals by Doping Side-on Carbosilane-Based Oligomers"
Kaneko, K.; Goto, M.; Haketa, Y.; Maeda, H.; Hanasaki, T.
Chem. Lett. **2018**, *47*, in press.
- (31) "Cyclic Anion-Responsive π -Electronic Molecules That Overcome Energy Losses Induced by Conformation Changes"
Kaname, S.; Haketa, Y.; Yasuda, N.; Maeda, H.
Org. Lett. **2018**, *20*, 3268–3272.
- (30) "Ion-Pairing Assemblies of π -Electronic Anions Formed by Intramolecular Hydrogen Bonding"
Maeda, H.; Takeda, Y.; Haketa, Y.; Morimoto, Y.; Yasuda, N.
Chem. Eur. J. **2018**, *24*, 8910–8916.
- (29) "Dynamic Polymorph Formation During Evaporative Crystallization from Solution: The Key Role of Liquid-like Clusters as "Crucible" at Ambient Temperature"
Oka, N.; Ito, F.; Haketa, Y.; Maeda, H.; Miyano, T.; Tohnai, N.; Ito, S.; Miyasaka, H.; Ozeki, S.
Chem. Eur. J. **2018**, *24*, 4343–4349.
- (28) "Relating Stacking Structures and Charge Transport in Crystal Polymorphs of the Pyrrole-Based π -Conjugated Molecule"
Fujita, T.; Haketa, Y.; Maeda, H.; Yamamoto, T.
Org. Electron. **2017**, *49*, 53–63.
- (27) "Dimension-controlled assemblies of anion-responsive π -electronic systems bearing aryl substituents with fan-shaped geometries"
Lakshmi, V.; Haketa, Y.; Yamakado, R.; Yasuda, N.; Maeda, H.
Chem. Commun. **2017**, *53*, 3834–3837.
- (26) "Dipyrrolylpyrimidines as anion-responsive π -electronic systems"
Haketa, Y.; Tamura, Y.; Yasuda, N.; Maeda, H.

- Org. Biomol. Chem.* **2016**, *14*, 8035–8038.
- (25) "Ion-Free and Ion-Pairing Assemblies of Anion-Responsive π -Electronic Systems Possessing Directly Linked Alkyl Chains"
Haketa, Y.; Katayama, D.; Fukunaga, S.; Bando, Y.; Sakurai, T.; Matsuda, W.; Seki, S.; Maeda, H.
Chem. Asian J. **2016**, *11*, 2025–2029.
- (24) " β -Perfluoroalkyl-substituted pyrrole as an anion-responsive π -electronic system through a single NH moiety"
Haketa, Y.; Takasago, R.; Maeda, H.
Chem. Commun. **2016**, *52*, 7364–7367.
- (23) "Ion-Pairing Assemblies Based on Pentacyano-Substituted Cyclopentadienide as a π -Electronic Anion"
 Bando, Y.; Haketa, Y.; Sakurai, T.; Matsuda, W.; Seki, S.; Takaya, H.; Maeda, H.
Chem. Eur. J. **2016**, *22*, 7843–7850.
- (22) "Chirality Induction by Formation of Assembled Structures Based on Anion-Responsive π -Conjugated Molecules"
 Maeda, H.; Hane, W.; Bando, Y.; Terashima, Y.; Haketa, Y.; Shibaguchi, H.; Kawai, T.; Naito, M.; Takaishi, K.; Uchiyama, M.; Muranaka, A.
Chem. Eur. J. **2013**, *19*, 16263–16271.
- (21) "Visualization of the complexation between chloride and anion receptors using volume change of ionomer gels in organic solvents"
 Iseda, K.; Haketa, Y.; Kokado, K.; Maeda, H.; Furuta, H.; Sada, K.
Soft Matter **2012**, *8*, 7490–7494.
- (20) "Asymmetric Induction in the Preparation of Helical Receptor-Anion Complexes: Ion-Pair Formation with Chiral Cations"
Haketa, Y.; Bando, Y.; Takaishi, K.; Uchiyama, M.; Muranaka, A.; Naito, M.; Shibaguchi, H.; Kawai, T.; Maeda, H.
Angew. Chem. Int. Ed. **2012**, *51*, 7967–7971.
- (19) "Ion Materials Comprising Planar Charged Species"
Haketa, Y.; Honsho, Y.; Seki, S.; Maeda, H.
Chem. Eur. J. **2012**, *18*, 7016–7020.
- (18) "Solid-state supramolecular assemblies consisting of planar charged species"
Haketa, Y.; Takayama, M.; Maeda, H.
Org. Biomol. Chem. **2012**, *10*, 2603–2606.
- (17) "Charge-based and charge-free molecular assemblies comprising π -extended derivatives of anion-responsive acyclic oligopyrroles"

- Bando, Y.; Sakamoto, S.; Yamada, I.; Haketa, Y.; Maeda, H.
Chem. Commun. **2012**, 48, 2301–2303.
- (16) "Charge-Based Assemblies Comprising Planar Receptor-Anion Complexes with Bulky Alkylammonium Cations"
 Dong, B.; Terashima, Y.; Haketa, Y.; Maeda, H.
Chem. Eur. J. **2012**, 18, 3460–3463.
- (15) "Anion-responsive covalently linked and metal-bridged oligomers"
 Maeda, H.; Kitaguchi, K.; Haketa, Y.
Chem. Commun. **2011**, 47, 9342–9344.
- (14) "Synthesis, Crystal Structures, and Supramolecular Assemblies of Pyrrole-Based Anion Receptors Bearing Modified Pyrrole β -Substituents"
Haketa, Y.; Sakamoto, S.; Chigusa, K.; Nakanishi, T.; Maeda, H.
J. Org. Chem. **2011**, 76, 5177–5184. (selected as a Featured Article)
- (13) "Water-supported organized structures based on wedge-shaped amphiphilic derivatives of dipyrrolyldiketone boron complexes"
 Maeda, H.; Eifuku, N.; Haketa, Y.; Ito, Y.; Lee E.; Lee, M.
Phys. Chem. Chem. Phys. **2011**, 13, 3843–3850.
- (12) "From Helix to Macrocyclic: Anion-Driven Conformation Control of π -Conjugated Acyclic Oligopyrroles"
Haketa, Y.; Maeda, H.
Chem. Eur. J. **2011**, 17, 1485–1492.
- (11) "Solid-state hydrogen-bonding self-assemblies and keto-enol tautomerism of 1,3-dipyrrolyl-1,3-propanediones"
Haketa, Y.; Eifuku, N.; Bando, Y.; Yamada, I.; Hagihara, A.; Maeda, H.
Supramol. Chem. **2011**, 23, 209–217.
- (10) "Oriented Salts: Dimension-Controlled Charge-by-Charge Assemblies from Planar Receptor-Anion Complexes"
Haketa, Y.; Sasaki, S.; Ohta, N.; Masunaga, H.; Ogawa, H.; Mizuno, N.; Araoka, F.; Takezoe, H.; Maeda, H.
Angew. Chem. Int. Ed. **2010**, 49, 10079–10083. (selected as a Hot Paper and "Press Release")
- (9) "Electronic and Optical Properties in the Solid-State Molecular Assemblies of Anion-Responsive Pyrrole-Based π -Conjugated Systems"
 Maeda, H.; Bando, Y.; Haketa, Y.; Honsho, Y.; Seki, S.; Nakajima, H.; Tohnai, N.
Chem. Eur. J. **2010**, 16, 10994–11002. (selected as a frontispiece)
- (8) "Discotic columnar mesophases derived from 'rod-like' π -conjugated anion-responsive acyclic oligopyrroles"

- Maeda, H.; Terashima, Y.; Haketa, Y.; Asano, A.; Honsho, Y.; Seki, S.; Shimizu, M.; Mukai, H.; Ohta, K.
Chem. Commun. **2010**, *46*, 4559–4561.
- (7) "Supramolecular Assemblies Derived from Formyl-Substituted π -Conjugated Acyclic Anion Receptors"
 Maeda, H.; Fujii, R.; Haketa, Y.
Eur. J. Org. Chem. **2010**, 1469–1482.
- (6) "Synthesis, Properties, and Solid-State Assemblies of β -Alkyl-Substituted Dipyrrolyldiketone BF₂ Complexes"
 Maeda, H.; Haketa, Y.; Bando, Y.; Sakamoto, S.
Synth. Met. **2009**, *159*, 792–796.
- (5) "Solvent-Assisted Organized Structures Based on Amphiphilic Anion-Responsive π -Conjugated Systems"
 Maeda, H.; Ito, Y.; Haketa, Y.; Eifuku, N.; Lee, E.; Lee, M.; Hashishin, T.; Kaneko, K.
Chem. Eur. J. **2009**, *15*, 3706–3719.
- (4) "Heteroaryl-Substituted C₃-Bridged Oligopyrroles: Potential Building Subunits of Anion-Responsive π -Conjugated Oligomers"
 Maeda, H.; Mihashi, Y.; Haketa, Y.
Org. Lett. **2008**, *10*, 3179–3182.
- (3) "Selective iodinated dipyrrolyldiketone BF₂ complexes as potential building units for oligomeric systems"
 Maeda, H.; Haketa, Y.
Org. Biomol. Chem. **2008**, *6*, 3091–3095.
- (2) "BF₂ complexes of α -alkyl-substituted dipyrrolyldiketones as acyclic anion receptors"
 Maeda, H.; Terasaki, M.; Haketa, Y.; Mihashi, Y.; Kusunose, Y.
Org. Biomol. Chem. **2008**, *6*, 433–436.
- (1) "Aryl-Substituted C₃-Bridged Oligopyrroles as Anion Receptors for Formation of Supramolecular Organogels"
 Maeda, H.; Haketa, Y.; Nakanishi, T.
J. Am. Chem. Soc. **2007**, *129*, 13661–13674.

Reviews and Book Chapters

- (9) 「 π 電子系イオンの配列制御による次元制御型集合体の創製」
 羽毛田洋平・前田大光
次世代のポリマー・高分子開発, 新しい用途展開と将来展望 技術情報協会, **2019**, Ch. 4-7, 237-249.

- (8) 「イオンペアリング π 電子系集合体の創製」
羽毛田 洋平・前田大光
超分子アニユアルレビュー **2018**, in press.
- (7) " π -Electronic Ion-Pairing Supramolecular Assemblies"
Haketa, Y.; Maeda, H.
In *Designed Molecular Space in Material Science and Catalysis*; Shirakawa, S. Ed.; Springer, **2018**, in press.
- (6) "Dimension-Controlled π -Electronic Ion-Pairing Assemblies "
Haketa, Y.; Maeda, H.
Bull. Chem. Soc. Jpn. **2018**, *91*, 420–436.
- (5) " π -Electronic Ion-Pairing Assemblies Providing Nanostructured Materials"
Haketa, Y.; Maeda, H.
In *Functional Organic and Hybrid Nanostructured Materials: Fabrication, Properties, and Applications*; Li, Q. Ed.; Wiley-VCH, **2018**, in press.
- (4) "Dimension-controlled ion-pairing assemblies based on π -electronic charged species"
Haketa, Y.; Maeda, H.
Chem. Commun. **2017**, *53*, 2894–2909.
- (3) "Supramolecular Assemblies of π -Electronic Charged Species"
Haketa, Y.; Yamakado, R.; Maeda, H.
In *Conjugated Objects: Developments, Synthesis, and Application*, Nagai, A.; Takagi, K. Eds., Pan Stanford, **2017**, Ch.13, 349–379.
- (2) 「イオンペア集合体を形成するアニオン応答性 π 電子系の合成」
羽毛田洋平・山門陵平・前田大光
有機合成化学協会誌 **2016**, *74* (3), 243–253.
- (1) "Charge-by-charge assemblies based on planar anion receptors"
Maeda, H.; Haketa, Y.
Pure Appl. Chem. **2011**, *83*, 189–199.

Invited Lectures

- (1) "Ion-Pairing Assemblies Based on "Genuine" π -Electronic Ions"
Yohei Haketa, Yuya Bando, Hiromitsu Maeda,
International Workshop on Supramolecular Nanoscience of Chemically Programmed Pigments (SNCPP16), June 2016, Kusatsu