

ResearcherID: G-6915-2016

Original Paper

Direct arylation polycondensation for the synthesis of medium-bandgap polymer donors (PBDB-T) for organic photovoltaics

Junpei Kuwabara*, Kota Hiyaji, Shuyang Guo, Xin Jiang, Takeshi Yasuda, Takaki Kanbara*

[Polym. J., 2023, 55, 395-404.](#)

Facile Synthesis of Bis-pentafluoroarylated Anthracene Derivatives for N-type Organic-Field-Effect Transistor Applications

Ryota Sato, Takeshi Yasuda, Takanobu Hiroto, Takaki Kanbara*, Junpei Kuwabara*

[Chem. Eur. J., 2023, e202203816.](#)

One-pot two-step cross-dehydrogenative-coupling polycondensation for synthesis of tetrafluorobenzene-based conjugated polymer

Naoki Onda, Ryota Sato, Junpei Kuwabara, Takeshi Yasuda, Takaki Kanbara*

[Synth. Met., 2023, 293, 117279.](#)

Unique regioselectivity of the Pd-catalysed cross-dehydrogenative coupling reaction of simple polyaromatic hydrocarbons with polyfluoroarenes

Ryota Sato, Tomoki Iida, Takaki Kanbara*, Junpei Kuwabara*

[Chem Commun., 2022, 58, 11511-11514.](#)

Tracking side reactions of the inverse vulcanization process and developing monomer selection guidelines

Yusuke Onose, Yuri Ito, Junpei Kuwabara*, Takaki Kanbara*

[Polym. Chem., 2022, 13, 5486-5493.](#)

Facile Synthesis of 1,7-Phenanthroline Derivatives and Evaluation of Their Properties as Hole-Blocking Materials in Organic Light-Emitting Diodes

Sachie Yamamoto, Takeshi Yasuda, Takaki Kanbara, Junpei Kuwabara*

[Bull. Chem. Soc. Jpn., 2022, 95, 458-465.](#) (BCSJ Award Article)

Nonstoichiometric hydroarylation polyaddition for synthesis of pyrrole-based

poly(arylenevinylene)s

Ryota Iwamori, Ryota Sato, Junpei Kuwabara Takaki Kanbara*

[*Polym. Chem.*, **2022**, *13*, 379-382.](#)

Hydrogen-bonded dimers of mono-alkylated diketopyrrolopyrroles and their physical properties

Junpei Kuwabara*, Ryuya Kawasaki, Takeshi Yasuda, Takaki Kanbara*

[*Synth. Met.*, **2022**, *284*, 117007.](#)

Direct Evidence of the Internal Deterioration Mechanism due to Molecular Chain Ends in Polymer Solar Cells by Operando Spin Detection

Haruka Asai, Dong Xue, Shinpei Kamiya, Junpei Kuwabara, Takaki Kanbara, Kazuhiro Marumoto*

[*ACS Appl. Polym. Mater.* **2022**, *4*, 607–617.](#)

Synthesis of Azine-Based Conjugated Polymers by Metal-Free Dehydration Polycondensation and Characterization of Their Physical Properties

Hiroki Murakami, Kyoya Kobayashi, Keita Suzuki, Takeshi Yasuda, Takaki Kanbara, Junpei Kuwabara*

[*Macromolecules*, **2021**, *54*, 11281–11288.](#)

Synthesis of pyrrole-based poly(arylenevinylene)s via Co-catalyzed hydroarylation of alkynes

Ryota Iwamori, Ryota Sato, Junpei Kuwabara, Takeshi Yasuda, Takaki Kanbara*

[*Macromol. Rapid Commun.*, **2021**, *42*, 2100283.](#)

One-Pot Synthesis of Triazatriphenylene Using the Povarov Reaction,

Sachie Yamamoto, Zong Yang Zhou, Goki Hiruta, Katsuhiko Takeuchi, Jun-Chul Choi, Takeshi Yasuda, Takaki Kanbara, Junpei Kuwabara*

[*J. Org. Chem.*, **2021**, *86*, 7920-7927.](#)

Algae-Inspired, Sulfur-Based Polymer with Infrared Transmission and Elastic Function

Junpei Kuwabara, Kaho Oi, Makoto M. Watanabe, Takashi Fukuda*, Takaki Kanbara*

[*ACS Appl. Polym. Mater.*, **2020**, *2*, 5173-5178.](#)

Air-stable Pd (0) catalyst bearing dual phosphine ligands: a detailed evaluation of air

stability and catalytic property in cross-coupling reactions

Ryota Sato, Takaki Kanbara* Junpei Kuwabara*

[*Dalton Trans.*, 2020, 49, 12814-12819.](#)

Facile access to conjugated polymers under aerobic conditions via Pd-Catalyzed direct arylation and aryl amination polycondensation

Xi, Chen; Akito Ichige; Junhui Chen; Iori Fukushima; Junpei Kuwabara, Takaki Kanbara*

[*Polymer*, 2020, 207, 122927.](#)

Mechanistic Study of Pd/Ag Dual-Catalyzed Cross-Dehydrogenative Coupling of Perfluoroarenes with Thiophenes

Yuto Shimoyama, Junpei Kuwabara, Takaki Kanbara*

[*ACS Catalysis*, 2020, 10, 3390-3397.](#)

Synthesis of an Air-Stable Pd(0) Catalyst Bearing Donor and Acceptor Phosphine Ligands

Ryota Sato, Takaki Kanbara*, Junpei Kuwabara*

[*Organometallics*, 2020, 39, 235-238.](#)

Effect of Purification Solvent on Polymer Impurities and Device Performance

Shunsuke Kodama, Junpei Kuwabara*, Xin Jiang, Iori Fukushima, Takaki Kanbara*

[*ACS Appl. Polym. Mater.*, 2019, 1, 2083-2088.](#)

Synthesis and Characterization of Sulfur-Based Polymers from Elemental Sulfur and Algae Oil

Shuhei Oishi, Kaho Oi, Junpei Kuwabara*, Ryo Omoda, Yuichi Aihara, Takashi Fukuda, Toshikazu Takahashi, Jun.-Chul. Choi, Makoto Watanabe, Takaki Kanbara*

[*ACS Appl. Polym. Mater.*, 2019, 1, 1195-1202.](#)

Postfunctionalization of reactive polyolefins derived from fatty acids

Kazuhisa Ohtake, Yusuke Onose, Junpei Kuwabara, Takaki Kanbara*

[*React. Funct. Polym.*, 2019, 139, 17-24.](#)

[Pd(4-R₃Si-IPr)(allyl)Cl], a Family of Silyl-Substituted Pd-NHC Complexes: Catalytic Systems for the Buchwald-Hartwig Amination

N. Fukaya, T. Mizusaki, K. Hatakeyama, Y. Seo, Y. Inaba, K. Matsumoto, V. Y. Lee, Y. Takagi, J. Kuwabara, T. Kanbara, Y.-K. Choe, J.-C. Choi*

[*Organometallics*, 2019, 38, 375-384.](#)

Synthesis of conjugated polymer consisting of three-component aromatic units via two-step cross-dehydrogenative-coupling reactions

Chie Tanaka, Junpei Kuwabara, Takeshi Yasuda, Takaki Kanbara*

[*Synth. Met.*, 2019, 254, 180-183.](#)

Synthesis of conjugated polymers via direct C-H/C-Cl coupling reactions using a Pd/Cu binary catalytic system

Junpei Kuwabara, * Wataru Tsuchida, Shuyang Guo, Ziwei Hu, Takeshi Yasuda, Takaki Kanbara*

[*Polym. Chem.*, 2019, 10, 2298-2304.](#)

Synthesis and characterization of a thermally crosslinkable polyolefin from oleic acid

Ohtake, Kazuhisa; Onose, Yusuke; Kuwabara, Junpei; Kanbara, Takaki*

[*J. Polym. Sci., Part A: Polym. Chem.* 2019, 57, 85-89.](#)

Facile Synthesis of Thienopyrroledione-based π -Conjugated Polymers via Direct Arylation Polycondensation under Aerobic Conditions

Akito Ichige, Hitoshi Saito, Junpei Kuwabara, Takeshi Yasuda, Jun-Chul Choi, Takaki Kanbara*

[*Macromolecules* 2018, 51, 6782-6788.](#)

Synthesis of Polyfluoro Arylene - Based Poly(arylenevinylene)s via Pd - Catalyzed Dehydrogenative Direct Alkenylation

H. Saito, J. Kuwabara, T. Yasuda, T. Kanbara*

[*Macromol. Rapid Commun.* 2018, 39, 1800414.](#)

Multi-molecular emission of a cationic Pt(II) complex through hydrogen bonding interaction

Kaho Yamaguchi, Kazuma Yamawaki, Takuya Kimura, Junpei Kuwabara,* Takeshi Yasuda, Yoshinobu Nishimura, and Takaki Kanbara*

[*Dalton. Trans.*, 2018, 47, 4081-4092.](#)

Synthesis of bithiazole-based semiconducting polymers via Cu-catalysed aerobic oxidative coupling

Alanna Faradhiyani, Qiao Zhang, Keisuke Maruyama, Junpei Kuwabara,* Takeshi Yasuda, and Takaki Kanbara*

[*Mater. Chem. Front.*, **2018**, *2*, 1306-1309.](#)

FRET-mediated near infrared whispering gallery modes: studies on the relevance of intracavity energy transfer with Q-factors

Osamu Oki, Soh Kushida, Annabel Mikosch, Kota Hatanaka, Youhei Takeda, Satoshi Minakata, Junpei Kuwabara, Takaki Kanbara, Thang D. Dao, Satoshi Ishii, Tadaaki Nagao, Alexander J. C. Kuehne, Felix Deschler, Richard H. Friend and Yohei Yamamoto*

[*Mater. Chem. Front.*, **2018**, *2*, 270-274.](#)

Synthesis of Conjugated Polymers Containing Octafluorobiphenylene Unit via Pd-Catalyzed Cross-Dehydrogenative-Coupling Reaction

Hideaki Aoki, Hitoshi Saito, Yuto Shimoyama, Junpei Kuwabara, Takeshi Yasuda, and Takaki Kanbara*

[*ACS Macro Lett.*, **2018**, *7*, 90-94.](#)

Modulation of the Emission Mode of a Pt(II) Complex via Intermolecular Interactions

Junpei Kuwabara*, Kaho Yamaguchi, Kazuma Yamawaki, Takeshi Yasuda, Yoshinobu Nishimura, and Takaki Kanbara*

[*Inorg. Chem.*, **2017**, *56*, 8726-8729.](#)

From Linear to Foldamer and Assembly: Hierarchical Transformation of a Coplanar Conjugated Polymer into a Microsphere

Soh Kushida, Osamu Oki, Hitoshi Saito, Junpei Kuwabara, Takaki Kanbara, Motomichi Tashiro, Michio Katouda, Yutaka Imamura, and Yohei Yamamoto*

[*J. Phys. Chem. Lett.*, **2017**, *8*, 4580-4586.](#)

Luminescent Ir(III) complexes bearing benzothiazole or benzoxazole-based pincer ligand

Junpei Kuwabara, Tomoni Namekawa, Eiko Sakabe, Masa-aki Haga, Takaki Kanbara*

[*J. Organomet. Chem.*, **2017**, *845*, 189-195.](#)

Facile one-pot access to π -conjugated polymers via sequential bromination/direct arylation polycondensation

Hitoshi Saito, Jiera Chen, Junpei Kuwabara, Takeshi Yasuda, Takaki Kanbara*

[*Polym. Chem.*, **2017**, *8*, 3006-3012.](#)

Direct Arylation Polycondensation for the Synthesis of Bithiazole-based Conjugated Polymers and Their Physical Properties

Junpei Kuwabara,* Masahiro Kuramochi, Songlin Liu, Takeshi Yasuda, Takaki Kanbara*

[*Polym. J.*, **2017**, *49*, 123-131.](#)

Suppression of Homocoupling Side Reactions in Direct Arylation Polycondensation for Producing High Performance OPV Materials

Junpei Kuwabara*, Yohei Fujie, Keisuke Maruyama, Takeshi Yasuda, and Takaki Kanbara*

[*Macromolecules*, **2016**, *49*, 9388–9395.](#)

Synthesis of n-type semiconducting polymer consisting of benzodipyrrolidone and thieno-[3,4-*c*]-pyrrole-4,6-dione via C-H direct arylation

Zhi An Wang, Junpei Kuwabara, Akito Ichige, Takeshi Yasuda, Takaki Kanbar

[*Synth. Met.*, **2016**, *222*, 383-387.](#)

Enwrapping Conjugated Polymer Microspheres with Graphene Oxide Nanosheets

Yusuke Aikyo, Soh Kushida, Daniel Braam, Junpei Kuwabara, Takahiro Kondo, Takaki Kanbara, Junji Nakamura, Axel Lorke, and Yohei Yamamoto*

[*Chem. Lett.* **2016**, *45*, 1024-1026.](#)

Synthesis of Conjugated Polymers Possessing Diketopyrrolopyrrole (DPP) Units Bearing Phenyl, Pyridyl, and Thiazolyl Groups by Direct Arylation Polycondensation: Effects of Aromatic Groups in DPP on Physical Properties

Junpei Kuwabara, Naoto Takase, Takeshi Yasuda, Takaki Kanbara*

[*J. Polym. Sci. A Polym. Chem.* **2016**, *54*, 2337-2345.](#)

Conjugated Polymer Blend Microspheres for Efficient, Long-Range Light Energy Transfer

Soh Kushida, Daniel Braam, Thang Duy Dao, Hitoshi Saito, Kosuke Shibasaki, Satoshi Ishii, Tadaaki Nagao, Akinori Saeki, Junpei Kuwabara, Takaki Kanbara, Masashi Kijima, Axel Lorke, and Yohei Yamamoto*

[*ACS Nano* **2016**, *10*, 5543–5549.](#)

Synthesis of pyrrole-based poly(arylenevinylene)s via Rh-catalyzed dehydrogenative direct alkenylation

Hitoshi Saito, Junpei Kuwabara, Takeshi Yasuda, Takaki Kanbara*

[*Polym. Chem.* **2016**, *7*, 2775-2779.](#)

Effects of the Terminal Structure, Purity, and Molecular Weight of an Amorphous Conjugated Polymer on Its Photovoltaic Characteristics

Junpei Kuwabara, Takeshi Yasuda, Naoto Takase, and Takaki Kanbara*

[*ACS Appl. Mater. Interfaces* **2016**, *8*, 1752-1758.](#)

Optically induced mode splitting in self-assembled, high quality-factor conjugated polymer microcavities

Daniel Braam*, Soh Kushida, Robert Niemöller, Günther M. Prinz, Hitoshi Saito, Takaki Kanbara, Junpei Kuwabara, Yohei Yamamoto, and Axel Lorke

[*Sci. Rep.* **2016**, *6*, 19635/1-5.](#)

Direct Arylation Polycondensation of Thienothiophenes with Various Dibromoarylenes

Tatsuya Kumada, Yuta Nohara, Junpei Kuwabara,* and Takaki Kanbara*

[*Bull. Chem. Soc. Jpn.* **2015**, *88*, 1530-1535.](#)

Facile synthesis of fluorene-based π -conjugated polymers via sequential bromination/direct arylation polycondensation

Hitoshi Saito, Junpei Kuwabara and Takaki Kanbara*

[*J. Polym. Sci. A Polym. Chem.* **2015**, *53*, 2198–2201.](#)

Improved power conversion efficiency of bulk-heterojunction organic photovoltaic cells using neat C70 as an effective acceptor for an amorphous p-conjugated polymer

Takeshi Yasuda*, Junpei Kuwabara, Liyuan Han, Takaki Kanbara

[*Org. Electron.* **2015**, *25*, 99-104.](#)

Synthesis of Bithiazole-based Crystalline Polymers via Pd-Catalyzed Direct C–H Arylation

Wei Lu, Junpei Kuwabara*, Masahiro Kuramochi, Takaki Kanbara*

[*J. Polym. Sci. A Polym. Chem.* **2015**, *53*, 1396-1402.](#)

Mechanistic studies and optimisation of a Pd-catalysed direct arylation reaction using phosphine-free systems

Junpei Kuwabara*, Masaru Sakai, Qiao Zhang, Takaki Kanbara*

[Org. Chem. Front. 2015, 2, 520-525.](#)

The effect of solvent in direct arylation polycondensation of substituted thiophenes

Junpei Kuwabara, Kohtarō Yamazaki, Takuya Yamagata, Wataru Tsuchida, Takaki Kanbara*

[Polym. Chem. 2015, 6, 891-895.](#)

Microwave-Assisted Polycondensation of 4-Octylaniline with Dibromoarylene

Naoto Takase, Junpei Kuwabara, Seong Jib Choi, Takeshi Yasuda, Liyuan Han, Takaki Kanbara

[J. Polym. Sci. A Polym. Chem. 2015, 53, 536-542.](#)

Preparation and Characterization of Green Reflective Films of Polyaniline Analogs Containing Azobenzene Units

Hikaru Yamada, Minoru Kukino, Zhi An Wang, Ryo Miyabara, Nobutaka, Fujimoto, Junpei Kuwabara, Kiyoto Matsuishi, and Takaki Kanbara*

[J. Appl. Polym. Sci. 2015, 132, 41275/1-7.](#)

Direct Arylation Polycondensation of Bithiazole Derivatives with Various Acceptors

Masahiro Kuramochi, Junpei Kuwabara*, Wei Lu, Takaki Kanbara*

[Macromolecules 2014, 47, 7378-7385.](#)

Aggregation-induced emission behavior of a pincer platinum(II) complex bearing a poly(ethylene oxide) chain in aqueous solution

Hiroya Honda, Junpei Kuwabara, Takaki Kanbara*

[J. Organomet. Chem. 2014, 772-723, 139-142.](#)

Self-assembled conjugated polymer spheres as fluorescent microresonators

Kenichi Tabata, Daniel Braam, Soh Kushida, Liang Tong, Junpei Kuwabara, Takaki Kanbara, Andreas Beckel, Axel Lorke*, Yohei Yamamoto*

[Sci. Rep. 2014, 4, 5902/1-5.](#)

Direct Arylation Polycondensation: A Promising Method for the Synthesis of Highly Pure,

High-Molecular-Weight Conjugated Polymers Needed for Improving the Performance of Organic Photovoltaics

Junpei Kuwabara, Takeshi Yasuda, Seong Jib Choi, Wei Lu, Koutarou Yamazaki, Shigehiro Kagaya, Liyuan Han, Takaki Kanbara*

[*Adv. Funct. Mater.* **2014**, *24*, 3226-3233.](#)

Synthesis and photophysical properties of diketopyrrolopyrrole-based near-infrared dyes

Takuya Yamagata, Junpei Kuwabara, and Takaki Kanbara*

[*Heterocycles*, **2014**, *89*, 1173-1181.](#)

Template-directed synthesis of macrocyclic aminopyridines: azacalix[n] (2,6)pyridines (n = 3, 4)

Natsuko Uchida, Ruoxi Zhi, Junpei Kuwabara, Takaki Kanbara*

[*Tetrahedron Lett.*, **2014**, *55*, 3070-3072.](#)

Emission behavior of secondary thioamide-based cationic pincer platinum(II) complexes in aggregate state

Hiroya Honda, Yasuyuki Ogawa, Junpei Kuwabara, Takaki Kanbara*

[*Eur. J. Inorg. Chem.* **2014**, *11*, 1865-1869.](#)

Chemical modification of amino acids by atmospheric-pressure cold plasma in aqueous solution

Eisuke Takai, Tsuyoshi Kitamura, Junpei Kuwabara, Satoshi Ikawa, Shunsuke Yoshizawa, Kentaro Shiraki, Hideya Kawasaki, Ryuichi Arakawa, Katsuhisa Kitano*

[*J. Phys. D: Appl. Phys.* **2014**, *47*, 285403.](#)

Tetramethylbithiophene in π -Conjugated Alternating Copolymers as Effective Structural Component for the Formation of Spherical Assemblies

Liang Tong, Soh Kushida, Junpei Kuwabara, Takaki Kanbara, Noriyuki Ishii, Akinori Saeki, Shu Seki, Seiichi Furumi, Yohei Yamamoto*

[*Polym. Chem.* **2014**, *5*, 3583-3587.](#)

Two-Step Direct Arylation for Synthesis of Naphthalenediimide-Based Conjugated Polymer

Yuta Nohara, Junpei Kuwabara*, Takeshi Yasuda, Liyuan Han, Takaki Kanbara*

[*J. Polym. Sci. A Polym. Chem.* **2014**, *52*, 1401-1407.](#)

Delayed Fluorescence Behaviors of Aminopyridine Oligomers:
Azacalix[n](2,6)pyridines (n = 3, 4) and their Linear Analog

Natsuko Uchida, Tohru Sato, Junpei Kuwabara, Yoshinobu Nishimura, and Takaki Kanbara*

[Chem. Lett. 2014, 43, 459–461.](#)

Deprotonation-Induced Structural Changes in SNS-Pincer Ruthenium Complexes with
Secondary Thioamide Groups

Yoko Komiyama, Junpei Kuwabara*, Takaki Kanbara*

[Organometallics, 2014, 33, 885-891.](#)

Optical properties of highly planar diketopyrrolopyrrole derivatives fixed by coordinate
bonds

Takuya, Yamagata, Junpei Kuwabara, Takaki Kanbara*

[Tetrahedron 2014, 70, 1451-1457.](#)

Molecular mechanism of plasma sterilization in solution with the reduced pH method:
importance of permeation of HOO radicals into the cell membrane

Eisuke Takai, Satoshi Ikawa, Katsuhisa Kitano, Junpei Kuwabara, Kentaro Shiraki*

[J. Phys. D: Appl. Phys. 2013, 46, 295402](#)

Microwave-Assisted Polycondensation via Direct Arylation of 3,4-
Ethylenedioxythiophene with 9,9-Dioctyl-2,7-dibromofluorene

Seong Jib Choi, Junpei Kuwabara* and Takaki Kanbara*

[ACS Sustainable Chem. Eng. 2013, 1, 878-882.](#)

Synthesis of π -Conjugated Polymer Consisting of Pyrrole and Fluorene Units by Ru-
Catalyzed Site-Selective Direct Arylation Polycondensation

Wei Lu, Junpei Kuwabara, Takaki Kanbara*

[Macromol. Rapid Commun. 2013, 34, 1151-1156.](#)

Syntheses, Crystal Structures, and Photophysical Properties of Platinum(II) Complexes
Containing a Disulfanenitrile Ligand

Hiroya Honda, Takayoshi Fujii*, Junpei Kuwabara, Takaki Kanbara

[Bull. Chem. Soc. Jpn., 2013, 86, 608-614.](#)

Hydrogen-bonding Linkage of Thymidine Derivatives with Carboxylic Acid and Pyridyl Groups in a Crystalline State

Junichi Hoshino, Junpei Kuwabara*, Takaki Kanbara*

[*J. Nanosci. Nanotechnol.* **2013**, *13*, 4593-4600.](#)

Ligand Modification of Cyclometalated Ruthenium Complexes in the Aerobic Oxidative Dehydrogenation of Imidazolines

Shota Aiki, Yuhei Kijima, Junpei Kuwabara, Ayako Taketoshi, Take-aki Koizumi, Shigehisa Akine, Takaki Kanbara*

[*ACS Catalysis*, **2013**, *3*, 812-816.](#)

Direct arylation polycondensation for synthesis of bithiophene-based alternating copolymers

Junpei Kuwabara, Yuta Nohara, Seong Jib Choi, Yohei Fujinami, Wei Lu, Ken Yoshimura, Jun Oguma, Katsuhiko Suenobu, Takaki Kanbara*

[*Polym. Chem.*, **2013**, *4*, 947-953.](#)

Spherical Assemblies from π -Conjugated Alternating Copolymers: Toward Optoelectronic Colloidal Crystals

Taeko Adachi, Liang Tong, Junpei Kuwabara, Takaki Kanbara, Akinori Saeki, Shu Seki, Yohei Yamamoto*

[*J. Am. Chem. Soc.*, **2013**, *135*, 870-876.](#)

Detailed optimization of polycondensation reaction via direct C-H arylation of ethylenedioxythiophene

Koutarou Yamazaki, Junpei Kuwabara, Takaki Kanbara*

[*Macromol. Rapid Commun.* **2013**, *34*, 69-73.](#)

Molecular Design of Organic Superbases, Azacalix[3](2,6)pyridines: Catalysts for 1,2- and 1,4-Additions

Natsuko Uchida; Junpei Kuwabara, Ayako Taketoshi, Takaki Kanbara*

[*J. Org. Chem.* **2012**, *77*, 10631-10637.](#)

Synthesis of 4,4'-Dinonyl-2,2'-bithiazole-based Copolymers via Pd-Catalyzed Direct C-H Arylation

Wei Lu, Junpei Kuwabara, Takaki Kanbara*

[*Polym. Chem.* **2012**, *3*, 3217-3219.](#)

Synthesis and Characterization of Diketopyrrolopyrrole Derivatives Having Electron-withdrawing Groups

Takuya Yamagata, Junpei Kuwabara, Takaki Kanbara*

[*Eur. J. Org. Chem.* **2012**, 5282-5290.](#)

Physical and Electrical Characteristics of Supramolecular Polymer Films Based on Guanosine Derivatives Modified with Tetrathiafulvalene Moiety

Seong Jib Choi, Junpei Kuwabara, Takaki Kanbara*

[*Polym. J.* **2012**, *44*, 946-951.](#)

Aerobic Oxidative Dehydrogenation of Benzyl Alcohols to Benzaldehydes by Using a Cyclometalated Ruthenium Catalyst

Ayako Taketoshi, Xin Ning Beh, Junpei Kuwabara, Take-aki Koizumi, and Takaki Kanbara*

[*Tetrahedron Lett.* **2012**, *53*, 3573-3576.](#)

Synthesis of π -Conjugated Polymers Containing Fluorinated Arylene Units via Direct Arylation: Efficient Synthetic Method of Materials for OLEDs

Wei Lu, Junpei Kuwabara*, Takayuki Iijima, Hideyuki Higashimura, Hideki Hayashi and Takaki Kanbara*

[*Macromolecules* **2012**, *45*, 4128-4133.](#)

Protein Inactivation by Low-temperature Atmospheric Pressure Plasma in Aqueous Solution

Eisuke Takai, Katsuhisa Kitano, Junpei Kuwabara, Kentaro Shiraki*

[*Plasma Process. Polym.* **2012**, *9*, 77-82.](#)

Two-step Changes in Luminescence Colour of Pt (II) Complex Bearing an Amide Moiety by Mechano- and Vapochromism

Seong Jib Choi, Junpei Kuwabara, Takaki Kanbara*

[*Chem. Lett.* **2012**, *41*, 65-67.](#)

Synthesis of Thiophene- and Bithiophene-based Alternating Copolymers via Pd-

catalyzed Direct C-H Arylation

Yohei Fujinami; Junpei Kuwabara, Wei Lu, Hideki Hayashi, Takaki Kanbara*

[ACS Macro Lett. **2012**, *1*, 67-70.](#)

Luminescent Ir(III) Complexes Containing Benzothiazole-based Tridentate Ligands:
Synthesis, Characterization, and Application to Organic Light-emitting Diodes

Junpei Kuwabara, Tomomi Namekawa, Masa-aki Haga, Takaki Kanbara*

[Dalton Trans. **2012**, *41*, 44-46.](#)

Photoelectrochemical Response of Poly(3-hexylthiophene) and Poly(2,3-
diethylquinoxaline-5,8-diyl) in Aqueous Media

Keisuke Saito, Junpei Kuwabara, Takaki Kanbara*

[Synthetic Met. **2011**, *161*, 1150-1153.](#)

Polycondensation of Dibromofluorene Analogues with Tetrafluorobenzene via Direct
Arylation

Wei Lu, Junpei Kuwabara, Takaki Kanbara*

[Macromolecules **2011**, *44*, 1252-1255.](#)

Versatile bridging ability of secondary thioamide group for constructing metal cluster
based on pincer complex

Ken Okamoto, Junpei Kuwabara, Takaki Kanbara*

[J. Organomet. Chem. **2011**, *696*, 1305-1309.](#) (24th ICOMC special issue)

The Catalytic Activity of a Cyclometalated Ruthenium(III) Complex for Aerobic
Oxidative Dehydrogenation of Benzylamines

Shota Aiki, Ayako Taketoshi, Junpei Kuwabara, Take-aki Koizumi, Takaki Kanbara*

[J. Organomet. Chem. **2011**, *696*, 1301-1304.](#) (24th ICOMC special issue)

Enhancement of Photoluminescence of Thioamide-based Pincer Palladium Complex in
Crystalline State

Junpei Kuwabara, Yasuyuki Ogawa, Ayako Taketoshi, and Takaki Kanbara*

[J. Organomet. Chem. **2011**, *696*, 1289-1293.](#) (24th ICOMC special issue)

Synthesis, Characterization, and Catalytic Reactivity of a Highly Basic Macrotricyclic
Aminopyridine

Natsuko Uchida, Ayako Taketoshi, Junpei Kuwabara, Toshihide Yamamoto, Yoshiaki Inoue, Yu Watanabe, Takaki Kanbara*

[Org. Lett. 2010, 12, 5242-5245.](#)

Synthesis and Metal-like Luster of Novel Polyaniline Analogs Containing Azobenzene Unit

Minoru Kukino, Junpei Kuwabara, Kiyoto Matsuishi, Takashi Fukuda, Takaki Kanbara*

[Chem. Lett. 2010, 39, 1248-1250.](#)

Allosteric Supramolecular Triple-Layer Catalysts

Hyo Jae Yoon, Junpei Kuwabara, Jun-Hyun Kim, Chad A. Mirkin*

[Science 2010, 330, 66-68.](#)

Electrically Conductive Hydrogen-Bond-Based Supramolecular Polymer with a Tetrathiafulvalene Moiety: Modulation of Electrical Conductivity and Flexibility of Film by External Stimulus

Seong Jib Choi, Junpei Kuwabara, Takaki Kanbara*

[Chem. Asian J. 2010, 5, 2154-2157.](#)

Palladium(II) and Platinum(II) Complexes Bearing κ^3 SCS Pincer Ligand with Azulene Unit

Junpei Kuwabara, Goro Munezawa, Ken Okamoto, Takaki Kanbara*

[Dalton Trans. 2010, 39, 6255-6261.](#)

Solid-state Structure and Optical Properties of Highly Fluorescent Diketopyrrolopyrrole Derivatives Synthesized by Cross-coupling Reaction

Junpei Kuwabara, Takuya Yamagata, Takaki Kanbara*

[Tetrahedron 2010, 66, 3736-3741.](#)

Luminescence Study of Thioamide-based Pincer Palladium Complexes in Poly(vinylpyrrolidone) Matrix

Yasuyuki Ogawa, Ayako Taketoshi, Junpei Kuwabara, Ken Okamoto, Takashi Fukuda, Takaki Kanbara*

[Chem. Lett. 2010, 39, 385-387.](#)

Synthesis of Highly Fluorescent Diketopyrrolopyrrole Derivative and Two-step Response

of Fluorescence to Acid

Takuya Yamagata, Junpei Kuwabara, Takaki Kanbara*

[*Tetrahedron Lett.* **2010**, *51*, 1596-1599.](#)

Crystal Structure and Intramolecular Hydrogen Bonding of a Substituted Diaminoquinoxaline

Junpei Kuwabara, Hironori Mori, Takaki Kanbara*

[*Heterocycles* **2009**, *78*, 2601-2607.](#)

Regioregulated Syntheses of Poly(aminopyridine)s by Pd-catalyzed Amination Reaction

Junpei Kuwabara, Hironori Mori, Takuya Teratani, Munetaka Akita, Takaki Kanbara*

[*Macromol. Rapid Commun.* **2009**, *30*, 997-1001.](#)

Structures of Co, Pd and Ni Complexes with Iminopyridine Ligands Having a Hydroxymethyl or Acrylate Pendant Group

Junpei Kuwabara, Daisuke Takeuchi, and Kohtaro Osakada*

[*Polyhedron* **2009**, *28*, 2459-2465.](#)

Pseudo-Allosteric Regulation of the Anion Binding Affinity of a Macrocyclic Coordination Complex

Junpei Kuwabara, Hyo Jae Yoon, Chad A. Mirkin*, Antonio G. DiPasquale, Arnold L. Rheingold

[*Chem. Commun.* **2009**, 4557-4559.](#)

Reactivity of Dinuclear Rhodium(I) Macrocycles Formed via the Weak-Link Approach

Junpei Kuwabara, Maxim V. Ovchinnikov, Charlotte L. Stern, and Chad A. Mirkin*

[*Organometallics*, **2008**, *27*, 789-792.](#)

Coordination Chemistry Approach to a Multieffector Enzyme Mimic

Junpei Kuwabara, Charlotte L. Stern, Chad A. Mirkin*

[*J. Am. Chem. Soc.* **2007**, *129*, 10074-10075.](#)

Early-Late Heterobimetallic Complexes as Initiator for Ethylene Polymerization. Cooperative Effect of Two Metal Centers to Afford Highly Branched Polyethylene

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[*Chem. Commun.* **2006**, 3815-3817.](#)

Copolymerization of 7-Methylenebicyclo[4.1.0]heptane with Carbon Monoxide Initiated by Optically Active Pd Complexes

Daisuke Takeuchi, Ayami Yasuda, Takeshi Okada, Junpei Kuwabara, Kohtaro Osakada*, Katsuhiko Tomooka

[Helv. Chim. Acta. 2006, 89, 1574-1588.](#)

Living Alternating Copolymerization of a Methylene cyclopropane Derivative with CO to Afford Polyketone with Dihydrophenanthrene-1,10-diyl Groups

Daisuke Takeuchi, Takeshi Okada, Junpei Kuwabara, Kohtaro Osakada*

[Macromol. Chem. Phys. 2006, 207, 1546-1555.](#)

Zr/Zr and Zr/Fe Dinuclear Complexes with Flexible Bridging Ligands. Preparation by Olefin Metathesis Reaction of the Mononuclear Precursors and Properties as Polymerization Catalysts

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[Organometallics 2005, 24, 2705-2712.](#)

Association of *trans*-[PdCl₂(NH=CPh₂-κN)₂] via Intermolecular N-H...Cl Hydrogen Bonding in the Solid State and in Solution.

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[Bull. Chem. Soc. Jpn. 2005, 78, 668-670.](#)

Cage-Type Hexanuclear Platinum(0) Clusters with Diphosphine and Isocyanide Ligands Encapsulating Two Mercury(0) Atoms

Tomoaki Tanase, Eri Goto, Hiroe Takenaka, Takashi Horiuchi, Yasuhiro Yamamoto, Junpei Kuwabara, Kohtaro Osakada*

[Organometallics 2005, 24, 234-244.](#)

Synthesis and Properties of Zr-Co Heterodinuclear Complexes with a Bridging Bis(cyclopentadienyl) Ligand

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[J. Organomet. Chem. 2005, 690, 269-275.](#)

Preparation and Properties of Cp₂Zr(μ-N=CAr₂)₂PdCl(Me), New Zr/Pd Heterobimetallic Complexes with Bridging Alkylideneamido Ligands

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[*Organometallics* 2004, 23, 5092-5095.](#)

MAO-Catalyzed Friedel-Crafts Reactions of Toluene with Chloroalkanes and with Propylene

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[*J. Mol. Catal. A.* 2004, 208, 39-44.](#)

Reaction of AlMe₃ with Heterobimetallic Zr/Rh Complexes Having a C₅H₄-CMe₂-Ind (or C₅H₄-CMe₂-C₅H₄) Ligand. Formation of Complexes with a Zr-Indenyl (or Zr-Cyclopentadienyl) σ -Bond

Daisuke Takeuchi, Junpei Kuwabara, Kohtaro Osakada*

[*Organometallics* 2003, 22, 2305-2311.](#)

Proceeding

Organic Light-Emitting Diodes Using Octafluorobiphenyl-Based Polymer Synthesized by Direct C–H/C–H Cross Coupling Reaction

Takeshi Yasuda*, Hideaki Aoki, Junpei Kuwabara, and Takaki Kanbara

[*J. Photopolym. Sci. Tech.*, 2018, 31, 323-327.](#)

Photovoltaic Properties of Bithiazole-Based Polymers Synthesized by Direct C-H Arylation

Takeshi Yasuda, Junpei Kuwabara, Liyuan Han, Takaki Kanbara

[*J. Photopolym. Sci. Tech.*, 2016, 29, 347-352.](#)

Selectivity of reaction sites for direct arylation polycondensation in bithiophene derivatives

Yohei Fujie, Junpei Kuwabara, Takaki Kanbara*

[*Mol. Cryst. Liq. Cryst.*, 2015, 622, 14-18.](#)

Emission from Charge-Transfer States in Bulk Heterojunction Organic Photovoltaic Cells Based on Ethylenedioxythiophene-Fluorene Polymers,

Takeshi Yasuda, Junpei Kuwabara, Liyuan Han, Takaki Kanbara,

[*Mol. Cryst. Liq. Cryst.*, 2015, 620, 107-111.](#)

Ru-catalyzed site-selective direct arylation polycondensation via ortho-metalation of pyrrole derivative

Takaki Kanbara*, Junpei Kuwabara, Wei Lu

[*IOP Conf. Ser.: Mater. Sci. Eng.* **2014**, *54*, 012012/1-9.](#)

Olefin Polymerization by Bimetallic Zr Catalyst. Ligand Effect for Activity and Stereoselectivity.

Junpei Kuwabara, Daisuke Takeuchi, Kohtaro Osakada*

[*Studies in Surface Science and Catalysis* **2006**, *161*, 135-140.](#)

Review

Step-Economical Synthesis of Conjugated Polymer Materials Composed of Three Components: Donor, Acceptor, and π Units

Junpei Kuwabara*, Takaki Kanbara*

[*Macromol. Rapid Commun.* **2021**, *42*, 2000493.](#)

Aziridine-based polyaddition, post-modification, and crosslinking: can aziridine rival epoxide in polymer chemistry?

Jung, Sangmin; Kang, Seohyun; Kuwabara, Junpei; Yoon, Hyo Jae*

[*Polym. Chem.*, **2019**, *10*, 4506-4512.](#)

Facile Synthesis of π -Conjugated Polymers via Direct Arylation Polycondensation

Junpei Kuwabara, Takaki Kanbara*

[*Bull. Chem. Soc. Jpn.*, **2019**, *92*, 152-161.](#)

Direct arylation polycondensation for synthesis of optoelectronic materials

Junpei Kuwabara*

[*Polym. J.*, **2018**, *50*, 1099-1106.](#)

Secondary Thioamides as Multidentate Ligands for Functional Metal Complexes

Ken Okamoto, Junpei Kuwabara, Takaki Kanbara*

[*Chem. Lett.*, **2015**, *44*, 102-110.](#)

Development of Synthetic Method for π -Conjugated Polymers via Direct Arylation Polycondensation

Junpei Kuwabara, Takaki Kanbara*

J. Synth. Org. Chem., Jpn., **2014**, 72, 1271-1277.