

平成24年度 研究業績

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1. 発表論文等 (査読付き論文, 著書, 総説等の発表状況)

- (1) Unsupported Nanoporous Gold Catalyst for Highly Selective Hydrogenation of Quinolines
Yan, M.; Jin, T.;* Chen, Q.; Ho, H. E.; Fujita, T.; Chen, L.-Y.; Bao, M.; Chen, M.-Y.; Asao, N.; Yamamoto, Y. *Org. Lett.* **2013**, DOI: 10.1021/ol400229z.
- (2) Functional 2-benzyl-1,2-dihydro[60]fullerenes as acceptors for organic photovoltaics: facile synthesis and high photovoltaic performances
Lu, S.; Jin, T.;* Yasuda, T.; Islam, A.; Akhtaruzzaman, M.; Han, L.; Alamry, K. A.; Kosa, S. A.; Asiri, A. M.; Yamamoto, Y.* *Tetrahedron* **2013**, *69*, 1302-1306.
- (3) Structure-property relationship of different electron donors: novel organic sensitizers based on fused dithienothiophene π -conjugated linker for high efficiency dye-sensitized solar cells
Akhtaruzzaman, M.; Menggenbateerc; Islam, A.;* El-Shafeie, A.;* Asao, N.; Jin, T.; Han, L.; Alamry, K. A.; Kosa, S. A.; Asiri, A. M.; Yamamoto, Y.* *Tetrahedron* **2013**, *69*, 3444-3450.
- (4) Nanoporous Gold Catalyst for Highly Selective Semihydrogenation of Alkynes: Remarkable Effect of Amine Additives
Yan, M.; Jin, T.;* Ishikawa, Y.; Minato, T.; Fujita, T.; Chen, L.-Y.; Bao, M.; Asao, N.; Chen, M.-W.; Yamamoto, Y. *J. Am. Chem. Soc.* **2012**, *134*, 17536-17542.
- (5) From molecular catalysts to nanostructured materials skeleton catalysts
Asao, N.; Jin, T.; Tanaka, S.; Yamamoto, Y.* *Pure Appl. Chem.* **2012**, *84*, 1771.
- (6) Structure-Property Relationship of Naphthalene Based Donor- π -Acceptor Organic Dyes for Dye-Sensitized Solar Cells: Remarkable Improvement of Open-Circuit Photovoltage
Yang, F.; Akhtaruzzaman, M.;* Islam, A.; Jin, T.;* El-Shafei, A.;* Qin, C. J.; Han, L.; Alamry, K. A.; Kosa, S. A.; Husseine, M. A.; Asiri, A. M.; Yamamoto, Y. *J. Mater. Chem.* **2012**, *22*, 22550-22557.
- (7) NaOH-Catalyzed Dimerization of Monofunctionalized Hydrofullerenes: Transition-Metal-Free, General, and Efficient Synthesis of Single-Bonded [60]Fullerene Dimers
Lu, S.; Jin, T.;* Bao, M.; Yamamoto, Y. *Org. Lett.* **2012**, *14*, 3466-3469.

- (8) Synthesis of 2,3-Dihydro-1*H*-inden-1-one Derivatives via Ni-Catalyzed Intramolecular hydroacylation
Yang, F.; Jin, T.;* Yamamoto, Y. *Tetrahedron* **2012**, *68*, 5223-5228.
- (9) Cascade Cyclization of Arylidynes using Iodine: Synthesis of Iodo-substituted Benzo[*b*]naphtho[2,1-*d*]thiophene Derivatives for Dye-sensitized Solar Cells
Ferrara, G.; Jin, T.;* Akhtaruzzaman, M.; Islam, A.; Han, L.; Jiang, H.; Yamamoto, Y. *Tetrahedron Lett.* **2012**, *53*, 1946-1950.
- (10) Palladium-catalyzed Bisfunctionalization of Active Alkenes by β -Acetonitrile-alpha-allyl Addition: Application to the Synthesis of Unsymmetric 1,4-Di(organo)fullerene Derivatives
Lu, S.; Jin, T.;* Bao, M.; Asiri, A. M.; Yamamoto, Y. *Tetrahedron Lett.* **2012**, *53*, 1210-1213.
- (11) Synthesis of New Donor-Acceptor-Donor Materials via Au-catalyzed Double Cascade Cyclization
Ferrara, G.; Jin, T.;* Oniwa, K.; Zhao, J.; Asiri, A. M.; Yamamoto, Y. *Tetrahedron Lett.* **2012**, *53*, 914-918.
- (12) Highly Efficient $\text{Cu}(\text{OAc})_2$ -Catalyzed Dimerization of Mono-Functionalized Hydrofullerenes Leading to Single Bonded [60]Fullerene Dimers
Lu, S.; Jin, T.;* Kwon, E.; Bao, M.; Yamamoto, Y. *Angew. Chem. Int. Ed.* **2012**, *51*, 802-806.
- (13) Click Chemistry of Alkyne-Azide Cycloaddition using Nanostructured Copper Catalysts
Jin, T.;* Yan, M.; Yamamoto, Y.* *ChemCatChem* **2012**, *4*, 1217-1229.

2. 学会発表等（国内外の招待講演および国際会議での発表状況）

- (1) Nanoporous Metals as Catalysts
Jin, T. The AIMR International Symposium 2013 (AMIS 2013), Sendai, Japan, 2013.2.19-21（口頭発表）.
- (2) Cyclopenta-fused polycyclic aromatic hydrocarbons as highly balanced ambipolar semiconductors in thin film organic field effect transistors
Zhang, X.; Kanagasekaran, T.; Oniwa, K.; Jin, T.; Shimotani, H.; Asao, N.; Tanigaki, K.; Yamamoto, Y. The AIMR International Symposium 2013 (AMIS 2013), Sendai, Japan, 2013.2.19-21（ポスター発表）.

- (3) Ambipolar organic light emitting field effect transistors with gold electrodes
Kanagasekaran, T.; Oniwa, K.; Shang, H.; Jin, T.; Tamura, H.; Hamada, I.; Shimotani, H.; Asao, N.; Ikeda, S.; Yamamoto, Y.; Tanigaki, K. The AIMR International Symposium 2013 (AMIS 2013), Sendai, Japan, 2013.2.19-21 (ポスター発表) .
- (4) Gain Properties in Newly Synthesized Thiophene-Furan-Phenylene Co-oligomer Single Crystals
Shang, H.; Ikeda, S.; Kanagasekaran, T.; Shimotani, H.; Oniwa, K.; Jin, T.; Asao, N.; Yamamoto, Y.; Tamura, H.; Hamada, I.; Abe, K.; Yoshizawa, M.; Tanigaki, K. The AIMR International Symposium 2013 (AMIS 2013), Sendai, Japan, 2013.2.19-21 (ポスター発表) .
- (5) Diffusion in Nanoporous Gold: Insights from Spectral Graph Theory
Packwood, D. M.; Jin, T.; Asao, N. The AIMR International Symposium 2013 (AMIS 2013), Sendai, Japan, 2013.2.19-21 (ポスター発表) .
- (6) Nanoporous Gold Catalyst for Highly Active and Selective Semihydrogenation of Alkynes: Remarkable Effect of Amine Additives
Jin, T.; Yan, M.; Ishikawa, Y.; Bao, M.; Asao, N.; Yamamoto, Y. 59th Symposium on Organometallic Chemistry, Osaka, Japan, 2012.9.13-15 (口頭発表) .

3. 特許

該当なし。

4. 学会・シンポジウム等の開催状況

該当なし。

5. 受賞等

該当なし。

6. 新聞報道等

該当なし。

7. 国民との科学・技術対話

該当なし。

8. 領域内の共同研究の準備・実施状況とその成果

該当なし。