

Publication List

as of July 24th, 2026

Original Papers

28. “Vapor-induced miscibility switching and optical response in a functional molecular liquid-pillar[5]arene system”
Tani, Y.*; Wada, K.; Oshima, Y.; Nakane, T.; Kawamoto, A.; Kurisu, G.*; Tachikawa, T.*; Ohtani, S.; Kato, K.; Ogoshi, T.*
Chem. Sci. **2026**, Advance Article. <https://doi.org/10.1039/d6sc03713e>
Highlighted in Nikkan Kogyo Shinbun (日刊工業新聞). **July, 22 2026.**
27. “Reversible Mechanical Interlocking via Stimuli-Triggered Nonhomeomorphic Topology Transformation Enables Highly Efficient Rotaxane Synthesis”
Xiao, C.; Li, X.; Okamoto, N.; Kobayashi, Y.*; Nishiuchi, T.; **Tani, Y.**; Yamaguchi, H.* *Angew. Chem. Int. Ed.* **2025**, 64, e202513783. <https://doi.org/10.1002/anie.202513783>
26. “Fast and efficient room-temperature phosphorescence from metal-free organic molecular liquids”
Tani, Y.*; Oshima, Y.; Okada, R.; Fujimura, J.; Miyazaki, Y.; Nakano, M.; Urakawa, O.; Inoue, T.; Ehara, T.; Miyata, K.; Onda, K.; Ogawa, T. *Chem. Sci.* **2025**, 16, 17480–17486.
<https://doi.org/10.1039/D5SC03768A>.
Most popular 2025 photochemistry articles
25. “Stable Tribrominated Phenalenyl Radical Exhibiting Long-Lived Luminescence from a Monomer– π -Dimer Equilibrium.”
Kohzuma, T.; Sugita, K.; **Tani, Y.**; Metzelaars, M.; Kubo, T.* *Org. Lett.* **2025**, 27, 6019–6024.
<https://doi.org/10.1021/acs.orglett.5c01541>.
24. “Impact of iodine-substitution on the symmetry and room-temperature phosphorescence behavior of thienyl diketone skeleton.”
Shikichi, D.; Ehara, T.; Komura, M.; Onda, K.; Miyata, K.*; **Tani, Y.*** *J. Chem. Phys.* **2025**, 162, 121101. <https://doi.org/10.1063/5.0255535>.
23. “Benzo[cd]Perylenyl: A π -Expanded Phenalenyl Radical with Enhanced Aggregation Enthalpy and Stability”
Ono, Y.; Goto, **Y.**; **Tani, Y.**; Nakasuji, K.; Sato, K.; Takui, T.; Shimizu, D.; Matsuda, K.; Kubo, T. *Asian J. Org. Chem.* **2025**, e202500300. <https://doi.org/10.1002/ajoc.202500300>.

22. “Fast, efficient, narrowband room-temperature phosphorescence from metal-free 1,2-diketones: rational design and the mechanism.”

Tani, Y.*; Miyata, K.*; Ou, E.; Oshima, Y.; Komura, M.; Terasaki, M.; Kimura, S.; Ehara, T.; Kubo, K.; Onda, K.; Ogawa, T.

Chem. Sci., **2024**, *15*, 10784–10793. <https://doi.org/10.1039/D4SC02841D>

Selected as Inside Back Cover.



Most popular 2024 physical, theoretical and computational chemistry articles

Most popular 2024 materials chemistry articles

21. “Organic neuromorphics and bioelectronics: general discussion”

Aitchison, C. M.; Albrecht, K.; Awaga, K.; Cameron, J.; Data, P.; Glöcklhofer, F.; Guo, X.; Heeney, M.; Hudson, Z. M.; Ie, Y.; Luscombe, C. K.; Matsuo, T.; Nakanishi, T.; Nakatsuka, N.; Nishide, H.; Sasaki, Y.; Schroeder, B. C.; Singh, M.; Skabara, P.; Takeda, Y.; **Tani, Y.**; Torsi, L.; Tsuchiya, Y.; Uematsu, T.; Yadav, D.; Yanai, N.

Faraday Discuss., **2024**, *250*, 83–95.

20. “Organic batteries: general discussion”

Aitchison, C. M.; Albrecht, K.; Awaga, K.; Cameron, J.; Data, P.; Fukazawa, A.; Glöcklhofer, F.; Ie, Y.; Luscombe, C. K.; Marcilla, R.; Nakatsuka, N.; Nishide, H.; Schroeder, B. C.; Singh, M.; Skabara, P.; Takeda, Y.; **Tani, Y.**; Uematsu, T.; Xie, G.; Yadav, D.; Yakiyama, Y.

Faraday Discuss., **2024**, *250*, 145–161.

19. “Excitonic organic materials for photochemical and optoelectronic applications: general discussion”

Aitchison, C. M.; Albrecht, K.; Awaga, K.; Bergmann, K.; Calbo, J.; Cameron, J.; Clark, J.; Collins, M.; Data, P.; Dos Santos, P.; Fujigaya, T.; Fujino, T.; Fukazawa, A.; Glöcklhofer, F.; Guo, X.; Heeney, M.; Hudson, Z. M.; Ie, Y.; Ishii, W.; Luscombe, C. K.; Marcilla, R.; Matsuo, T.; Miyazaki, S.; Nakagawa, S.; Nakanishi, T.; Nakatsuka, N.; Nishide, H.; Sasaki, Y.; Schroeder, B. C.; Singh, M.; Skabara, P.; Takeda, Y.; Tanaka, Y.; **Tani, Y.**; Tsuchiya, Y.; Tsutsui, Y.; Uematsu, T.; Xie, G.; Yanai, N.

Faraday Discuss., **2024**, *250*, 298–334.

18. “Photoinduced crystal melting with luminescence evolution based on conformational isomerisation”

Komura, M.; Sotome, H.; Miyasaka, H.; Ogawa, T.; **Tani, Y.***

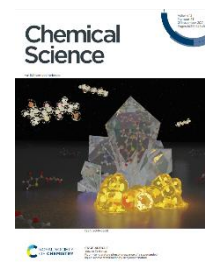
Chem. Sci., **2023**, *14*, 5302–5308. <http://doi.org/10.1039/d3sc00838j>

Selected as Inside Front Cover

Most popular 2023 physical and theoretical chemistry articles.



17. "Modulating Room-Temperature Phosphorescence-To-Phosphorescence Mechanochromism by Halogen Exchange"
Takewaki, Y.; Ogawa, T.; **Tani, Y.***
Front. Chem., **2022**, 9, 812593. <http://doi.org/10.3389/fchem.2021.812593>
16. "Synthesis of Fe(II)/Co(II)-Fused Triphenyl Porphyrin Dimer as Candidate for Oxygen Reduction Reaction Catalyst"
Wibowo, A. H.; Pradifta, A.; Masykur, A.; Yamashita, K.; **Tani, Y.**; Akbar, A. Y.; Ogawa, T.
Indonesian J. Chem., **2021**, 21, 871–881.
15. "Room-temperature phosphorescence of a supercooled liquid: kinetic stabilisation by desymmetrisation"
Komura, M.; Ogawa, T.; **Tani, Y.***
Chem. Sci., **2021**, 12, 14363–14368. <http://doi.org/10.1039/D1SC03800A>
Selected as Inside Front Cover.
14. "Structure–property relationship in contrasting aggregation-induced enhancement/quenching of emission in rigid aromatic molecules"
Tani, Y.*; Ogawa, T.
J. Mater. Chem. C **2021**, 9, 4281–4288. <http://doi.org/10.1039/D0TC06083F>
13. "Single-Molecular Bridging in Static Metal Nanogap Electrodes Using Migrations of Metal Atoms"
Naitoh, Y.*; **Tani, Y.**; Koyama, E.; Nakamura, T.; Sumiya, T.; Ogawa, T.; Misawa, G.; Shima, H.; Sugawara, K.; Suga, H.; Akinaga, H.
J. Phys. Chem. C **2020**, 124, 14007–14015.
12. "Mechanoresponsive Turn-On Phosphorescence by a Desymmetrization Approach"
Tani, Y.*; Komura, M.; Ogawa, T.*
Chem. Commun., **2020**, 56, 6810–6813. <http://doi.org/10.1039/d0cc01949f>
11. "Structure determination and negative differential resistance of tetraarylporphyrin/polyoxometalate 2:1 complexes"
Yamazaki, Y.; Yamashita, K.; **Tani, Y.**; Aoyama, T.; Ogawa, T.*
J. Mater. Chem. C **2020**, 8, 14423–14430.
10. "Room-Temperature Phosphorescence-to-Phosphorescence Mechanochromism of a Metal-Free Organic 1,2-Diketone"
Tani, Y.*; Terasaki, M.; Komura, M.; Ogawa, T.*
J. Mater. Chem. C, **2019**, 7, 11926–11931. <http://doi.org/10.1039/C9TC04176A>



9. "Palladium-Catalyzed Double Carbonylative Cyclization of Benzoins: Synthesis and Photoluminescence of Bis-Ester-Bridged Stilbenes"
Tani, Y.*; Ogawa, T.*
Org. Lett. **2018**, 20, 7442–7446. <http://doi.org/10.1021/acs.orglett.8b03169>
8. "Boraformylation and Silaformylation of Allenes"
 Fujihara, T.; Sawada, A.; Yamaguchi, T.; Tani, Y.; Terao, J.; Tsuji, Y.
Angew. Chem., Int. Ed. **2017**, 56, 1539–1543. <http://doi.org/10.1002/anie.201611314>
Selected as Back Cover and "Hot paper".
7. "Flash cationic polymerization followed by bis-end-functionalization. A new approach to linear-dendritic hybrid polymers"
Tani, Y.; Takumi, M.; Moronaga, S.; Nagaki, A.; Yoshida, J.-i.
Eur. Polym. J. **2016**, 80, 227–233. <http://doi.org/10.1016/j.eurpolymj.2016.02.021>
6. "Polymerization of vinyl ethers initiated by dendritic cations using flow microreactors"
 Nagaki, A.; Takumi, M.; Tani, Y.; Yoshida, J.-i.
Tetrahedron **2015**, 71, 5973–5978. <http://doi.org/10.1016/j.tet.2015.05.096>
5. "Copper-catalyzed C–C bond-forming transformation of CO₂ to alcohol oxidation level: selective synthesis of homoallylic alcohols from allenes, CO₂, and hydrosilanes"
Tani, Y.; Kuga, K.; Fujihara, T.; Terao, J.; Tsuji, Y.
Chem. Commun. **2015**, 51, 13020–13023. <http://doi.org/10.1039/c5cc03932k>
4. "Copper-Catalyzed Silylative Allylation of Ketones and Aldehydes Employing Allenes and Silylboranes"
Tani, Y.; Yamaguchi, T.; Fujihara, T.; Terao, J.; Tsuji, Y.
Chem. Lett. **2015**, 44, 271–273. <http://doi.org/10.1246/cl.141018>
Highlighted in Synfacts. Synfacts **2015**, 11, 0162.
3. "Copper-Catalyzed Regiodivergent Silacarboxylation of Allenes with Carbon Dioxide and a Silylborane"
Tani, Y.; Fujihara, T.; Terao, J.; Tsuji, Y.
J. Am. Chem. Soc. **2014**, 136, 17706–17709. <http://doi.org/10.1021/ja512040c>
Most Read Articles in JACS in December.
2. "Nickel-Catalyzed Doublecarboxylation of Alkynes Employing Carbon Dioxide"
 Fujihara, T.; Horimoto, Y.; Mizoe, T.; Sayyed, F. B.; Tani, Y.; Terao, J.; Sakaki, S.; Tsuji, Y.
Org. Lett. **2014**, 16, 4960–4963. <http://doi.org/10.1021/ol502538r>
Highlighted in Synfacts. Synfacts **2014**, 10, 1311.

1. “Copper-Catalyzed Silacarboxylation of Internal Alkynes by Employing Carbon Dioxide and Silylboranes”
Fujihara, T.; **Tani, Y.**; Semba, K.; Terao, J.; Tsuji, Y.
Angew. Chem., Int. Ed. **2012**, 51, 11487–11490. <http://doi.org/10.1002/anie.201207148>
Selected as a “Hot paper”.
Highlighted in Nikkan Kogyo Shinbun (日刊工業新聞). November, 2 2012.

総説・解説

8. “高効率な室温りん光を示す分子液体の開発”
谷洋介, *機能材料*, シーエムシー出版, **2026**, 46, 32–37.
https://www.cmcbooks.co.jp/products/detail.php?product_id=116127
7. “Dynamic excitons in organic light-emitting systems ”
Suzuki, K.; Sakuda, E.; **Tani, Y.**; Akiyama, M.; Albrecht, K.; Aizawa, N.; Izawa, S.; Kaji, H. J.
Chem. Phys. **2025**, 162, 061001. <https://doi.org/10.1063/5.0250413>.
6. “光を当てると融けて光る有機結晶”
谷洋介, *サイエンスネット*, 数研出版, **2024**, 81, 10–13.
<https://www.chart.co.jp/subject/rika/scnet/81/Snet81-3.pdf>
5. “様々な刺激に応答する有機りん光材料”
谷洋介, *化学と工業*, 日本化学会, **2023**, 77, 36–37.
4. “配座変化に基づく有機結晶の光融解とりん光による融解過程の可視化”
谷洋介, *光化学*, 光化学協会, **2023**, 54, 80–83. http://doi.org/10.60391/koukagaku.54.2_80
3. “ハロゲン化チエニルジケトンの機械刺激に応答する室温りん光機能”
谷洋介*, 小村真央, *有機合成化学協会誌*, 有機合成化学協会, **2023**, 81, 492–500.
<http://doi.org/10.5059/yukigoseikyokaishi.81.492>
2. “融けると光る有機りん光分子”
谷洋介, *超分子研究会アニュアルレビュー*, 高分子学会, **2023**, 43, 4–5.
[https://main.spsj.or.jp/c12/2023gyoji/annual%20review_No.43%20\(2022\).pdf](https://main.spsj.or.jp/c12/2023gyoji/annual%20review_No.43%20(2022).pdf)
1. “機械刺激による室温りん光の Turn-on 応答：同形・異機能な有機結晶に基づく分子運動の評価”
谷洋介*, 小村真央, 小川琢治
有機結晶部会ニュースレター, 日本化学会 有機結晶部会, **2021**, 48, 2–3.
https://oc.csj.jp/issues/NL48_contents.pdf