

Takeshi Fujita Publication List

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ResearcherID: <http://www.researcherid.com/rid/Q-5564-2017>

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<Original Papers>

- 1) T. Fujita, K. Ide, T. C. Jenkins, T. Nojima, J. Ichikawa, "Synthesis of 3-(Trifluoromethyl)indoles by Oxidative Cyclization of *o*-Sulfonamido- α -(trifluoromethyl)styrenes," *Asian J. Org. Chem.*, in press.
- 2) T. Fujita, M. Hattori, M. Matsuda, R. Morioka, T. C. Jenkins, M. Ikeda, J. Ichikawa, "Nucleophilic *5-endo-trig* cyclization of 2-(trifluoromethyl)allylic metal enolates and enamides: Synthesis of tetrahydrofurans and pyrrolidines bearing *exo*-difluoromethylene units," *Tetrahedron*, **75**, 36–46 (2019).
- 3) T. Fujita, R. Morioka, T. Arita, J. Ichikawa, " sp^3 Carbon–Fluorine Bond Activation in 2,2-Difluorohomoallylic Alcohols via Nucleophilic *5-endo-trig* Cyclisation: Synthesis of 3-Fluorinated Furan Derivatives," *Chem. Commun.*, **54**, 12938–12941 (2018). Highlighted as **Back Cover Picture**: *Chem. Commun.*, **54**, 12938 (2018).
- 4) T. Fujita, N. Konno, Y. Watabe, T. Ichitsuka, A. Nagaki, J. Yoshida, J. Ichikawa, "Flash Generation and Borylation of 1-(Trifluoromethyl)vinyllithium toward Synthesis of α -(Trifluoromethyl)styrenes," *J. Fluorine Chem.*, **207**, 72–76 (2018).
- 5) T. Fujita, R. Kinoshita, T. Takanohashi, N. Suzuki, J. Ichikawa, "Ring-size-selective construction of fluorine-containing carbocycles via intramolecular iodoarylation of 1,1-difluoro-1-alkenes," *Beilstein, J. Org. Chem.*, **13**, 2682–2689 (2017).
- 6) K. Fuchibe, K. Shigeno, N. Zhao, H. Aihara, R. Akisaka, T. Morikawa, T. Fujita, K. Yamakawa, T. Shimada, J. Ichikawa, "Pinpoint-fluorinated Polycyclic Aromatic Hydrocarbons (F-PAHs): Syntheses of Difluorinated Subfamily and Their Properties", *J. Fluorine Chem.*, **203**, 173–184 (2017).

- 7) Y. Watabe, K. Kanazawa, T. Fujita, J. Ichikawa, "Nickel-Catalyzed Hydroalkenylation of Alkynes through C–F Bond Activation: Synthesis of 2-Fluoro-1,3-dienes," *Synthesis*, **49**, 3569–3575 (2017).
- 8) I. Takahashi, M. Hayashi, T. Fujita, J. Ichikawa, "Brønsted Acid-catalyzed Tandem Cycloaromatization of Naphthalene-based Bisacetals: Selective Synthesis of *ortho*-Fused Six-hexagon Benzenoids," *Chem. Lett.*, **46**, 392–394 (2017).
- 9) K. Saito, T. Ikeda, Y. Yamamura, H. Saitoh, M. Hishida, Y. Kobayashi, T. Fujita, J. Ichikawa, "Cell-quintupling: Structural phase transition in a molecular crystal, bis(*trans*-4-butylcyclohexyl)methanol," *J. Chem. Phys.*, **146**, 074503 (2017).
- 10) T. Fujita, M. Takazawa, K. Sugiyama, N. Suzuki, J. Ichikawa, "Domino C–F Bond Activation of the CF₃ Group: Synthesis of Fluorinated Dibenzo[*a,c*][7]annulenes from 2-(Trifluoromethyl)-1-alkenes and 2,2'-Diceriobiaryls," *Org. Lett.*, **19**, 588–591 (2017).
- 11) T. Fujita, I. Takahashi, M. Hayashi, J. Wang, K. Fuchibe, J. Ichikawa, "Facile Synthesis of Polycyclic Aromatic Hydrocarbons: Brønsted Acid Catalyzed Dehydrative Cycloaromatization of Carbonyl Compounds in 1,1,1,3,3,3-Hexafluoropropan-2-ol," *Eur. J. Org. Chem.*, 262–265 (2017).
- 12) N. Suzuki, T. Fujita, K. Y. Amsharov, J. Ichikawa, "Aluminium-Mediated Aromatic C–F Bond Activation: Regioswitchable Construction of Benzene-fused Triphenylene Frameworks," *Chem. Commun.*, **52**, 12948–12951 (2016). Highlighted as **Inside Front Cover Picture**: *Chem. Commun.*, **52**, 12918 (2016).
- 13) T. Fujita, Y. Watabe, S. Yamashita, H. Tanabe, T. Nojima, J. Ichikawa, "Silver-Catalyzed Vinylic C–F Bond Activation: Synthesis of 2-Fluoroindoles from β,β-Difluoro-*o*-sulfonamidostyrenes," *Chem. Lett.*, **45**, 964–966 (2016). Highlighted as **Editor's Choice**.
- 14) T. Fujita, K. Sugiyama, S. Sanada, T. Ichitsuka, J. Ichikawa, "Platform for Ring-Fluorinated Benzoheterole Derivatives: Palladium-Catalyzed Regioselective 1,1-Difluoroallylation and Heck Cyclization," *Org. Lett.*, **18**, 248–251 (2016). Highlighted in *Synfacts*, **12**, 264 (2016).
- 15) T. Fujita, T. Arita, T. Ichitsuka, J. Ichikawa, "Catalytic Defluorinative [3 + 2] Cycloaddition of Trifluoromethylalkenes with Alkynes via Reduction of Nickel(II) Fluoride Species," *Dalton Trans.*, **44**, 19460–19463 (2015).
- 16) N. Suzuki, T. Fujita, J. Ichikawa, "Method for the Synthesis of Dibenzo[*g,p*]Chrysenes:

- Domino Friedel–Crafts-type Cyclization of Difluoroethenes Bearing Two Biaryl Groups,” *Org. Lett.*, **17**, 4984–4987 (2015). Highlighted in *Synfacts*, **11**, 1266 (2015).
- 17) T. Ichitsuka, T. Fujita, J. Ichikawa, “Nickel-Catalyzed Allylic C(sp³)–F Bond Activation of Trifluoromethyl Groups via Fluorine Elimination: Synthesis of Difluoro-1,4-dienes,” *ACS Catal.*, **5**, 5947–5950 (2015).
- 18) T. Fujita, Y. Watabe, T. Ichitsuka, J. Ichikawa, “Ni-Catalyzed Synthesis of Fluoroarenes via [2+2+2] Cycloaddition Involving α -Fluorine Elimination,” *Chem. Eur. J.*, **21**, 13225–13228 (2015).
- 19) K. Fuchibe, T. Morikawa, K. Shigeno, T. Fujita, J. Ichikawa, “Pinpoint-Fluorinated Phenacenes: New Synthesis and Solubility Enhancement Strategies,” *Org. Lett.*, **17**, 1126–1129 (2015).
- 20) T. Ichitsuka, T. Takanohashi, T. Fujita, J. Ichikawa, “A Versatile Difluorovinylolation Method: Cross-Coupling Reactions of the 2,2-Difluorovinylzinc–TMEDA Complex with Alkenyl, Alkynyl, Allyl, and Benzyl Halides,” *J. Fluorine Chem.*, **170**, 29–37 (2015).
- 21) T. Ichitsuka, T. Fujita, T. Arita, J. Ichikawa, “Double C–F Bond Activation via β -Fluorine Elimination: Nickel-Mediated [3+2] Cycloaddition of 2-Trifluoromethyl-1-alkenes with Alkynes,” *Angew. Chem. Int. Ed.*, **53**, 7564–7568 (2014). Highlighted as **Cover Picture**: *Angew. Chem. Int. Ed.*, **53**, 7371 (2014).
- 22) T. Fujita, M. Ikeda, M. Hattori, K. Sakoda, J. Ichikawa, “Nucleophilic 5-endo-trig Cyclization of 3,3-Difluoroallylic Metal Enolates and Enamides: Facile Synthesis of Ring-Fluorinated Dihydroheteroles,” *Synthesis*, **46**, 1493–1505 (2014).
- 23) T. Fujita, S. Sanada, Y. Chiba, K. Sugiyama, J. Ichikawa, “Two-Step Synthesis of Difluoromethyl-Substituted 2,3-Dihydrobenzoheteroles,” *Org. Lett.*, **16**, 1398–1401 (2014).
- 24) J. Ichikawa, H. Tanabe, S. Yoshida, T. Kawai, M. Shinjo, T. Fujita, “A New Organic Two-Electron Oxidant: 9,10-Diaryl-9,10-dihydroanthracene-9,10-bis(ylum),” *Chem. Asian J.*, **8**, 2588–2591 (2013).
- 25) T. Fujita, N. Suzuki, T. Ichitsuka, J. Ichikawa, “Facile Synthesis of Unsymmetrical 1,1-Diaryl-2,2-difluoroethenes via Stepwise Coupling of 1,1-Dibromo-2,2-difluoroethenes,” *J. Fluorine Chem.*, **155**, 97–101 (2013).
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Cyclization of 3,3-Difluoroallylic Ketone Enolates: Synthesis of 5-Fluorinated 2-Alkylidene-2,3-dihydrofurans,” *Synlett*, **24**, 57–60 (2013).

- 27) T. Fujita, Y. Matsuo, E. Nakamura, “Synthesis of Tetradeca- and Pentadeca(organo)-[60]fullerenes Containing Unique Photo- and Electroluminescent π -Conjugated Systems,” *Chem. Mater.*, **24**, 3972–3980 (2012).
- 28) P.-S. Lee, T. Fujita, N. Yoshikai, “Cobalt-Catalyzed, Room-Temperature Addition of Aromatic Imines to Alkynes via Directed C–H Bond Activation,” *J. Am. Chem. Soc.*, **133**, 17283–17295 (2011).
- 29) T. Fujita, T. Ichitsuka, K. Fuchibe, J. Ichikawa, “Facile Synthesis of β,β -Difluorostyrenes via the Negishi Coupling of Thermally Stable 2,2-Difluorovinyl Zinc–TMEDA Complex,” *Chem. Lett.*, **40**, 986–988 (2011).
- 30) K. Gao, P.-S. Lee, T. Fujita, N. Yoshikai, “Cobalt-Catalyzed Hydroarylation of Alkynes through Chelation-Assisted C–H Bond Activation,” *J. Am. Chem. Soc.*, **132**, 12249–12251 (2010).
- 31) T. Fujita, Y. Matsuo, E. Nakamura, “Reductive Benzylolation of Dimetallo Hexaaryl-[70]fullerenes on the Equatorial Region,” *Chem. Asian J.*, **5**, 835–840 (2010).
- 32) I. Paterson, G. J. Naylor, T. Fujita, E. Guzmán, A. E. Wright, “Total Synthesis of a Library of Designed Hybrids of the Microtubule-Stabilising Anticancer Agents Taxol, Discodermolide and Dictyostatin,” *Chem. Commun.*, **46**, 261–263 (2010).
- 33) Y. Matsuo, K. Tahara, T. Fujita, E. Nakamura, “Di- and Trinuclear [70]Fullerene Complexes: Syntheses and Metal–Metal Electronic Interactions,” *Angew. Chem. Int. Ed.*, **48**, 6239–6241 (2009).
- 34) Y. Matsuo, T. Fujita, E. Nakamura, “Hoop-shaped Condensed Aromatic System: Synthesis and Structure of Iron- and Ruthenium–Hepta(organo)[60]fullerene Complexes,” *Chem. Asian J.*, **2**, 948–955 (2007).

<Reviews>

- 1) T. Fujita, K. Fuchibe, J. Ichikawa, “Transition Metal-Mediated and -Catalyzed C–F Bond Activation via Fluorine Elimination,” *Angew. Chem. Int. Ed.*, **58**, 390–402 (2019).

- 2) 梶辺耕平、藤田健志、市川淳士、「ピンポイントフッ素化多環式芳香族炭化水素 (F-PAH) : フルオロアルケンの求電子的活性化による合成と性質」、有機合成化学協会誌, **76**, 938–953 (2018).
- 3) T. Fujita, J. Ichikawa, “Synthetic Methods for Ring-Fluorinated Pyrrole Derivatives,” *Heterocycles*, **95**, 694–714 (2017).

<Books>

- 1) 藤田健志、梶辺耕平、市川淳士、「フッ素脱離を利用する炭素-フッ素結合活性化反応の現状」、今野勉監修「有機フッ素化合物の最新動向」、シーエムシー出版, pp 74–93 (2018).
- 2) 藤田健志、市川淳士、「フッ素化学入門 2015 — フッ素化合物の合成法」, 三共出版, pp 112–115, 172–175, 178–181, 193–199 (2015).
- 3) T. Fujita, J. Ichikawa, “Syntheses, Properties, and Applications of Fluorinated Isoquinolines” in “Fluorine in Heterocyclic Chemistry Volume 2,” V. Nenajdenko Ed., Springer, pp 181–210 (2014).
- 4) 藤田健志, 「フッ素に“+”が乗った!？」 月刊『化学』「2013 年の化学: 注目の論文」, 化学同人, 2014 年 3 月号, pp 62–63.

<Patents>

- 1) 市川淳士、藤田健志、高橋一光, 「1, 1, 1, 3, 3, 3-ヘキサフルオロプロパン-2-オールと脂肪族炭化水素系溶媒を用いた二相系反応媒体」, 特開 2018-145123 (2018).
- 2) 中村栄一、松尾豊、藤田健志, 「単分子トランジスタおよび単分子トランジスタに用いるフラーレン誘導体」, 特開 2008-288421 (2008).