

CURRICULUM VITAE

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Education

2013 – 2016 Ph.D. Department of Materials Science and Engineering,
Nagoya Institute of Technology. Aichi, Japan.
(Advisor: Prof. Masato Suzuki)
2011 – 2013 M.S. Department of Materials Science and Engineering,
Nagoya Institute of Technology. Aichi, Japan.
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2007 – 2011 B.S. Department of Life and Materials Engineering,
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Research and Professional Experience

2019 – present Associate Professor
School of Chemical Engineering and Light Industry, Guangdong
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2016 – 2019 Postdoctoral Fellow
Graduate School of Pharmaceutical Sciences, Kyoto University,
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Publications

1. Jinying Lu, Lei Huang, Huatai Liang, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka, "Asymmetric Phase-Transfer Alkylation of Readily Available Aryl Aldehyde Schiff Bases of Amino Acid Ethyl Esters." *Org. Lett.*, **2024** [DOI: 10.1021/acs.orglett.3c04247].
2. Shiyong Liu, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka. "Copper- and Nickel- Catalyzed C–P Coupling Reactions between P(O)–H Compounds and Alkyl Radicals Generated from Alkylsilyl Peroxides." *Arkivoc*, **2024**, 2024, 202312131.
3. Jiahao Liu, Shiyong Liu, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka. "Synthetic Utility of Functionalized Alkylsilyl Peroxides for Fe-Catalyzed and Visible-Light-Promoted Radical Transformation." *Chem. Sci*, **2024**, *15*, 4757–4762.
4. Shengyu Yu, Jiahao Liu, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka. "Design of Y-Shaped Trimers of Chiral Phase-Transfer Catalysts for the Asymmetric Alkylation of Amino Acid Derivatives." *Synlett*, **2023**, *34*, 2388–2392.
5. Shuji. Nagano, Natsumi Maeda, Terumasa Kato, Akira Matsumoto, Keiji Maruoka. "Visible-Light-Promoted Alkylation of Electron-Deficient Alkenes with Alkylsilyl Peroxides." *Tetrahedron Lett.*, **2023**, *122*, 154486.
6. Qin Yang, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka. "Synthetic Utility of Alkyl tert-Butyl Peroxides in a Copper-Catalyzed Radical Functionalization." *Org. Lett.*, **2023**, *25*, 2958–2963.
7. JingWen. Jia, Terumasa Kato, Keiji Maruoka. "*p*-Methoxybenzyl-Radical-Promoted Chemoselective Protection of *sec*-Alkylamides." *J. Org. Chem.*, **2023**, *88*, 2575–2582.
8. Mi Zhou, Hanbin Lu, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka. "Synthesis of 1,3-Dicarbonyl Compounds Bearing Hetero-Substituted α -Quaternary Carbon *via* Fe(II)-Catalyzed Alkylation with Alkylsilyl Peroxides." *Tetrahedron Lett.*, **2022**, *110*, 154176.
9. Hanbin Lu, Canhua Zhou, Zhe Wang, Terumasa Kato, Yan Liu, Keiji Maruoka. "Fe-Catalyzed Three-Component Coupling Reaction of $\alpha,\beta,\gamma,\delta$ -Unsaturated Carbonyl Compounds and Conjugate Dienes with Alkylsilyl Peroxides and Nucleophiles." *J. Org. Chem.*, **2022**, *87*, 8824–8834.
10. Weiping Xu, Terumasa Kato, Yan Liu, Akira Matsumoto, Keiji Maruoka, "Fe-Catalyzed Dicarbofunctionalization of Vinylarenes with Alkylsilyl Peroxides and β -Keto Carbonyl Substrates." *Org. Lett.*, **2022**, *24*, 2641–2645.
11. Wenfeng Zhong, Weiping Xu, Qin Yang, Terumasa Kato, Yan Liu, Keiji Maruoka.

- “A New Approach for the Copper-Catalyzed Functionalization of Alkyl Hydroperoxides with Organosilicon Compounds via *in-situ*-Generated Alkylsilyl peroxides” *Tetrahedron*, **2022**, *112*, 132627.
12. Terumasa Kato, Keiji Maruoka. “Selective Functionalization of Benzylic C–H Bonds of Two Different Benzylic Ethers by Bowl-Shaped *N*-Hydroxyimide Derivatives as Efficient Organoradical catalysts.” *Chem. Commun.* **2022**, *58*, 1021–1024.
 13. Weiping Xu, Wenfeng Zhong, Qin Yang, Terumasa Kato, Yan Liu, Keiji Maruoka. “*In-situ*-Generation of Alkylsilyl Peroxides from Alkyl Hydroperoxides and their Subsequent Copper-Catalyzed Functionalization with Organosilicon Compounds.” *Tetrahedron Lett.* **2021**, *75*, 153144.
 14. Hanbin Lu, Jiamin Lv, Canhua Zhou, Mi Zhou, Yanxiong Fang, Jinxiang Dong, Terumasa Kato, Yan Liu, Keiji Maruoka. *Eur. J. Org. Chem.* **2021**, *2021*, 1909–1912.
 15. Jiamin Lv, Weiping Xu, Hanbin Lu, Terumasa Kato, Yan Liu, Keiji Maruoka. “The Copper-Catalyzed Selective Monoalkylation of Active Methylene Compounds with Alkylsilyl Peroxides.” *Org. Biomol. Chem.* **2021**, *19*, 2658–2662.
 16. Weiping Xu, Yan Liu, Terumasa Kato, Keiji Maruoka. “The Formation of C–C or C–N Bonds via the Copper-Catalyzed Coupling of Alkylsilyl Peroxides and Organosilicon Compounds: A Route to Perfluoroalkylation.” *Org. Lett.* **2021**, *23*, 1809–1813.
 17. Terumasa Kato, Keiji Maruoka. “Design of Bowl-Shaped *N*-Hydroxyimide Derivatives as New Organoradical Catalysts for Site-Selective C(sp³)–H Bond Functionalization Reactions” *Angew. Chem. Int. Ed.* **2020**, *59*, 14261–14264. (Highlighted in *SYNFACTS*, 2020, **16**, 1212.)
 18. Hanbin Lu, Jiamin Lv, Canhua Zhou, Terumasa Kato, Yan Liu, Dr. Keiji Maruoka. “Practical Synthesis of High-Performance Amino Tf-Amide Organocatalysts for Asymmetric Aldol Reactions” *Asian, J. Org. Chem.* **2020**, *9*, 206–209.
 19. Takumi Seihara, Shunya Sakurai, Terumasa Kato, Ryu Sakamoto, Keiji Maruoka, “Synthesis of Functionalized Organoboron/Silicon Compounds by Copper Catalyzed Coupling of Alkylsilyl Peroxides and Diboron/Silylborane Reagents” *Org. Lett.*, **2019**, *21*, 2477–2481.
 20. Kevin A. Juárez-Ornelas, J. Oscar C. Jiménez-Halla, Terumasa Kato, César R. Solorio-Alvarado, Keiji Maruoka. “Iodine(III)-Catalyzed Electrophilic Nitration of Phenols via Non-Brønsted Acidic NO₂⁺ Generation” *Org. Lett.*, **2019**, *21*, 1315–1319.
 21. Shunya Sakurai, Terumasa Kato, Ryu Sakamoto, Keiji Maruoka, “Generation of Alkyl Radicals from Alkylsilyl Peroxides and Their Applications to C–N or C–O Bond Formations” *Tetrahedron*, **2019**, *75*, 172–179.

22. Ryu Sakamoto, Terumasa Kato, Shunya Sakurai, Keiji Maruoka. "Copper-Catalyzed C(sp)–C(sp³) Coupling of Terminal Alkynes with Alkylsilyl Peroxides via a Radical Mechanism" *Org. Lett.*, **2018**, *20*, 1400–1403.
23. Terumasa Kato, Shin-ichi Matsuoka, Masato Suzuki. " N-Heterocyclic Carbene-Mediated Redox Condensation of Alcohols" *Chemical Commun.* **2016**, *52*, 8569–8572.
24. Terumasa Kato, Shin-ichi Matsuoka, Masato Suzuki. "Transfer hydrogenation promoted by N-heterocyclic carbene and water" *Chemical Commun.*, **2015**, *51*, 13906–13909.
25. Terumasa Kato, Shin-ichi Matsuoka, Masato Suzuki. "Cooperative N-Heterocyclic Carbene/Bronsted Acid Catalysis for the Tail-to-Tail (Co)dimerization of Methacrylonitrile" *J. Org. Chem.*, **2014**, *79*, 4484–4491.
26. Terumasa Kato, Yoshiya Ota, Shin-ichi Matsuoka, Koji Takagi, Masato Suzuki "Mechanistic Studies of the Tail-to-Tail Dimerization of Methyl Methacrylate Catalyzed by N-Heterocyclic Carbene" *J. Org. Chem.* **2013**, *78*, 8739–8747.