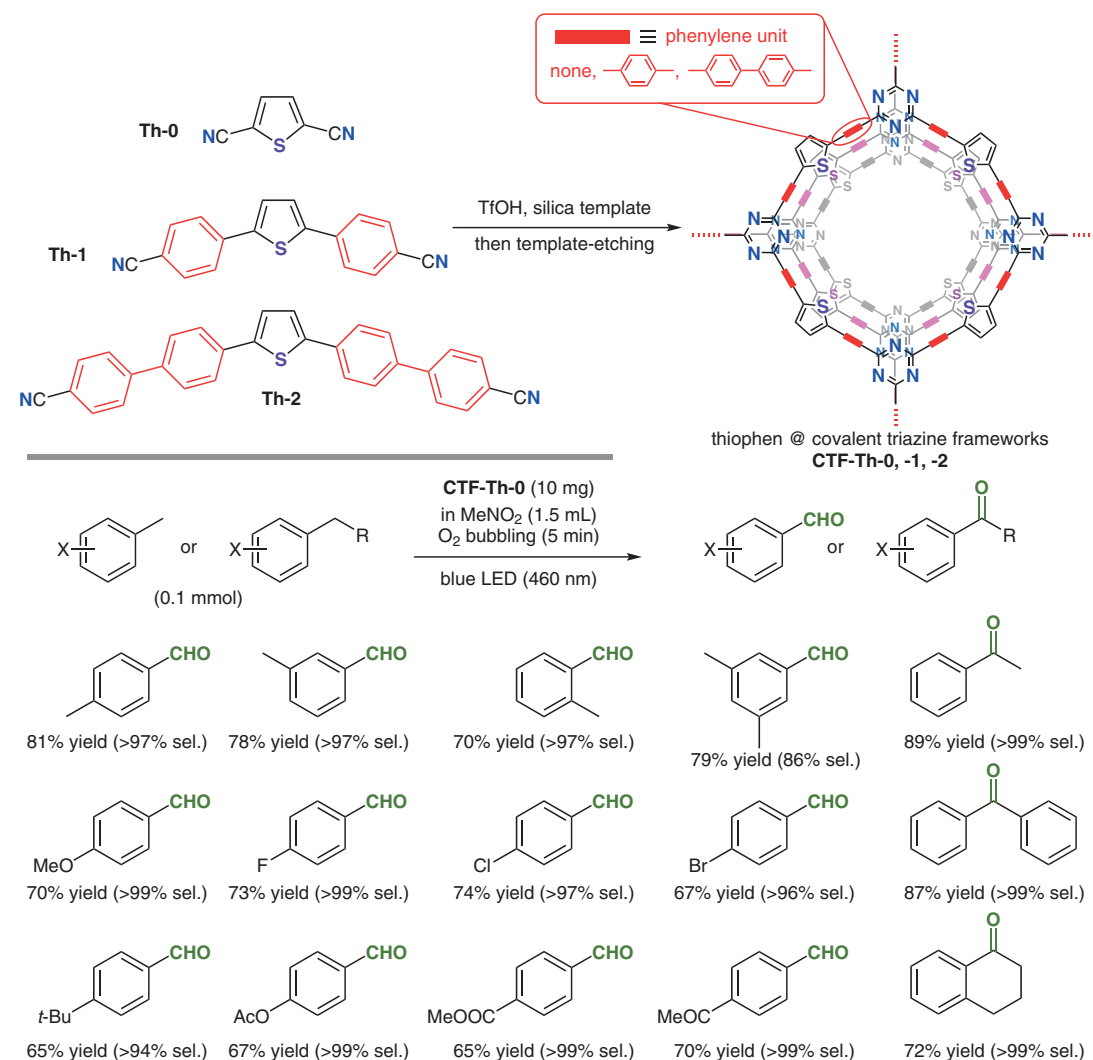


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Triazine Frameworks for the Photocatalytic Selective Oxidation of Toluene
Angew. Chem. Int. Ed. **2024**, *63*, e202400101 DOI: 10.1002/anie.202400101.

Triazine COF for the Photocatalytic Aerobic Oxidation of Toluenes



Significance: A triazine-based covalent organic framework bearing thiophene units CTF-Th-0 was found to promote the photocatalytic oxidation of toluenes with molecular oxygen under blue LED irradiation to give the corresponding benzaldehydes. Alkylbenzenes gave acetophenones under similar conditions.

Comment: A series of CTF-Th-X was prepared through the super acid-catalyzed polymerization of dicyanothiophenes Th-0, -1, -2, respectively, with a silica template. In the photooxidation of toluene, used CTF-Th-0 was recovered by centrifugation and reused four times without a significant loss of its catalytic performance.

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Synfacts 2024, 20(10), 1071 Published online: 13.09.2024
DOI: 10.1055/s-0043-1775069; Reg-No.: Y11524SF

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Category

Polymer-Supported Synthesis

Key words

triazines

COF

thiophenes

photocatalysis

oxidation

toluene

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Month

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