

The influence of rotational motion of Fe and Fe/Cu nanowires on their activity when applied as co-catalysts in aerobic oxidation of acroleine catalyzed by *N*-hydroxyphthalimide.

Autorzy

Wojciech Lipiec

Jarosław M. Sobczak

Anna M. Trzeciak

Rok wydania

2015

Czasopismo

Applied Catalysis A-General

Numer woluminu

506

Strony

8-13

DOI

10.1016/j.apcata.2015.08.024

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

Iron nanowires (FeNWs) and copper-sheathed iron nanowires (Fe/CuNWs) were prepared and used as co-catalyst in aerobic oxidation of acroleine catalyzed by *N*-hydroxyphthalimide (NHPI). Acroleine was smoothly transformed into acrylic acid with up to 97 % yields at room temperature under atmospheric pressure of dioxygen. The influence of the rotational motion of co-catalysts on the dynamics of the catalytic reaction and their activity when recycling the process was studied.

Słowa kluczowe

Intensifying catalytic chemical reactions, Aerobic oxidation, *N*-Hydroxyphthalimide, Nanowires, Acroleine, Acrylic acid

Adres publiczny

<http://dx.doi.org/10.1016/j.apcata.2015.08.024>

Strona internetowa wydawcy

<http://www.elsevier.com>