Document details - Heteropoly acid supported on activated natural clay-catalyzed synthesis of 3,4-dihydropyrimidinones/thiones through Biginelli reaction under solvent-free conditions

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Heteropoly acid supported on activated natural clay-catalyzed synthesis of 3,4-dihydropyrimidinones/thiones through Biginelli reaction under solvent-free conditions(Article)

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Abstract

Dihydropyrimidinones/thiones (DHPM's) have been prepared by one-pot condensation of methyl acetoacetate, aldehydes, urea/thiourea in the presence of heteropoly-11-tungsto-1-vanadophosphoric acid, $H_4[PVW_{11}O_{40}] \cdot 32H_2O$, (HPV) supported on activated natural clay (HPVAC) under solvent-free reaction condition have been proposed. The DHPM derivatives were identified through elemental analysis and melting point measurements and characterized by FT-IR, ^{1}H-NMR, ^{13}C-NMR spectroscopic methods. © 2017 Taylor & Francis.

Author keywords

3,4-Dihydropyrimidinones/thiones | heteropoly acid | multi-component synthesis | natural clay

Indexed keywords

EMTREE drug terms: 3,4 dihydropyrimidin 2(1h) one derivative | 3,4 dihydropyrimidin 2(1h) thione derivative | acetoacetic acid | aldehyde | benzaldehyde | phosphoric acid derivative | pyrimidinone derivative | solvent | thioketone | thiourea | unclassified drug

EMTREE medical terms: Article | Biginelli reaction | carbon nuclear magnetic resonance | catalyst | elemental analysis | infrared spectroscopy | melting point | one pot synthesis | polymerization | proton nuclear magnetic resonance | reaction analysis | reaction time

Chemicals and CAS Registry Numbers:

acetoacetic acid, 541-50-4, 623-58-5; benzaldehyde, 100-52-7; thiourea, 62-56-6

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