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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,  $H_4[PW_{11}O_{40}] \cdot 32H_2O$ , (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,  $^1H$ -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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