

2,3-二取代-4-(1H-1,2,4-三唑-1-基)-5-苯基氨基噻吩的合成及生物活性研究

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摘要 合成了九个以噻吩为母体环的含三唑环的化合物——2, 3-二取代-4-(1H-1, 2, 4-三唑-1-基)-5-苯基氨基噻吩(2a-2i), 并测定了2a的晶体结构. 晶体为三斜晶系, P-1空间群, 晶胞参数为: a=0. 79816(15) nm, b=1. 00259(13)nm, c=1. 4478(4)nm, $\alpha=100. 326(16)^\circ$, $\beta=94. 69(2)^\circ$, $\gamma=106. 083(9)^\circ$, V=1. 0845 (4) nm³, z=2, D_c=1. 396 g / cm³. 初步生物活性表明所有目标化合物杀菌活性较低, 有一定的植物生长调节活性.

关键词 [三唑 P](#) [晶体结构](#) [生物活性](#) [噻吩 P](#) [植物生长调节剂](#) [杀菌剂](#)

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Synthesis and Preliminary Biological Study of 2,3-Disubstituted-4- (1H-1, 2,4-triazo-1-yl) -5-phenylaminothiophene

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Abstract Nine novel compounds, 2,3-disubstituted-4-(1^H-1,2,4-triazo-1-yl)-5- phenylaminothiophenes (2a~2i), were synthesized and identified by ¹H NMR, IR, MS spectra and elemental analysis. 3a was determined by X- ray single crystal diffraction analysis. Crystal structure of 2a belongs to triclinic system with space group P-1. The unit cell parameters are a =0.79816 (15) nm, b = 1.00259 (13) nm, c = 1.4478 (4) nm, $\alpha = 100.326 (16)^\circ$, $\beta = 94.69 (2)^\circ$, $\gamma = 106.083 (9)^\circ$, V= 1. 0845 (4) nm³, Z = 2, D_c = 1.396 g/cm³. Preliminary biological study showed that 2a ~ 2i exhibited relative plant growth regulativity but low fungicidal activities.

Key words [PYRRODIAZOLE P](#) [CRYSTAL STRUCTURE](#) [BIOLOGICAL ACTIVITY](#) [THIOPHENE P](#) [PLANT GROWTH REGULATORS](#) [BACTERICIDAL AGENTS](#)

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