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Short Note

Synthesis of 3-{4-[4-(Benzylideneamino)benzenesulfonyl]-phenyl}-2-phenylquinazolin-4(3*H*)-one

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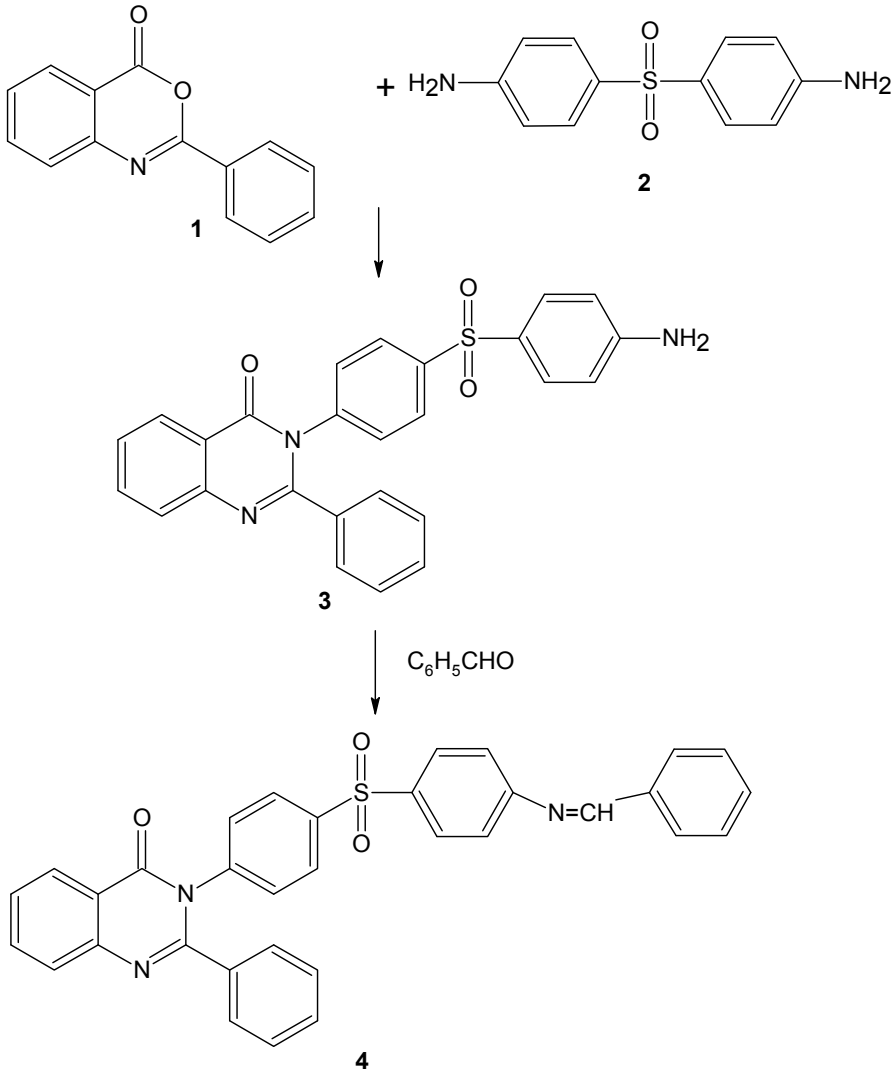
Abstract: The present work describes the synthesis of a Schiff base, 3-{4-[4-(benzylidene-amino)benzenesulfonyl]phenyl}-2-phenylquinazolin-4(3*H*)-one from a novel quinazolin-one, 3-[4-(4-aminobenzenesulfonyl)phenyl]-2-phenylquinazolin-4(3*H*)-one. The quin-azolinone was prepared by reacting 2-phenyl-4*H*-3,1-benzoxazin-4-one with dapsone. The structure of the synthesized Schiff base is confirmed by IR, ^{1}H NMR, ^{13}C NMR, MS and elemental analysis.

Keywords: 2-phenyl-4*H*-3,1-benzoxazin-4-one, 3-{4-[4-(benzylideneamino)benzene-sulfonyl]phenyl}-2-phenylquinazolin-4(3*H*)-one

Introduction

Fused nitrogen-containing heterocycles are structural fragments of many natural compounds and are important for various vital processes. Quinazolinones have been frequently used in medicine because of their wide spectrum of biological activities [1-6]. Different quinazolinone derivatives have been reported for their antibacterial, antifungal, anti-HIV, anthelmintic, CNS depressant and antitubercular activities. Schiff bases have also gained importance in recent days due to their potential biological

activities [7]. In this paper, we want to report the synthesis of a novel Schiff base from a quinazolinone.



Synthesis

Preparation of 3-[4-(4-aminobenzenesulfonyl)phenyl]-2-phenylquinazolin-4(3H)-one 3

2-Phenyl-4*H*-3,1-benzoxazine-4-one (**1**) was prepared according to the literature [8]. Compound **1** (3.34 g, 0.01 mol) was dissolved in 20 ml of ethanol and then Dapsone **2** (7.44 g, 0.03 mol) was added to it. The mixture was refluxed for 4 h and cooled. The separated solid **3** was recrystallized from ethanol; yield: 61%, m.p.:148^{o}C.

Preparation of Schiff Base 4

A mixture of compound **3** (4.55 g, 0.01 mol), benzaldehyde (1.06 g, 0.01 mol) and ethanol (20 ml) was refluxed for 6 h. The resulting mixture was cooled and poured into ice-water. The separated solid

was filtered and washed with water. Recrystallization of the crude product from ethanol afforded colorless crystals of **4**. The yield of the product is 68%.

Melting point: sublimation above 190^{o}C
IR (KBr pellet, cm^{-1}): 1631 (C=N), 1764 (N-C=O, quinazolinone)
^{1}H NMR (500 MHz, MeOD): 7.2-7.9 (m, 22H, Ar-H), 8.5 (s, 1H, -N=CH-)
^{13}C NMR: 121.2, 126.4, 126.8, 127.8, 127.9, 128.1, 128.6, 130.3, 132.3, 136.5, 146.9, 152.8, 157.1, 164.0.
MS (m/z): 541 (M^{+}, 8%), 119 (100%)
Elemental Analysis: Calculated: C, 73.18; H, 4.28; N, 7. 76; S,5.92;
Found: C, 73.08; H, 4.24; N, 7. 72 ; S,5.91.

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