## 4,5-Dimethoxy-2-(4-methylbenzoyl)-1-(4-methylphenylsulfonylamido)benzene

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For this synthesis, we propose a modification of the reaction procedure described in [1]. To a warm solution of amine $1(2.06 \mathrm{~g}, 8 \mathrm{mmol})$ in acetone $(70 \mathrm{~mL}), p-\mathrm{TsCl}(3.5 \mathrm{~g}, 1.8 \mathrm{mmol})$ was added and the reaction mixture was heated to dissolve $\mathrm{p}-\mathrm{TsCl}$. After that, water ( 7 mL ) and $\mathrm{NaHCO}_{3}(1.70 \mathrm{~g}, 20 \mathrm{mmol})$ were added. The mixture was heated to reflux for 5 days. In order to separate product 2, $\mathrm{H}_{2} \mathrm{O}(25 \mathrm{~mL})$ was added and the reaction mixture was concentrated to half its volume. The crystallization from acetone with charcoal gave titled compound ( $1.8 \mathrm{~g}, 53 \%$ ) as pale yellow crystals. The filtrate after separating compound $\mathbf{2}$ was diluted with water and extracted with ethyl acetate. The extracts were dried over $\mathrm{Na}_{2} \mathrm{SO}_{4}$, and solvent was evaporated. The residue was worked up as described above yielding the additional amount of the compound $2(0.92 \mathrm{~g}, 27 \%)$.

Total yield of compound $\mathbf{2}$ is $2.72 \mathrm{~g}(80 \%)$.
M.p. $218{ }^{\circ} \mathrm{C}$ (acetone).

IR (Nujol): 1620 (C=O), 3280 (NH).
${ }^{1} \mathrm{H}$ NMR $\left(\mathrm{CDCl}_{3}, 80 \mathrm{MHz}\right): 2.17\left(3 \mathrm{H}, \mathrm{s}, \mathrm{CH}_{3}\right) ; 2,40\left(3 \mathrm{H}, \mathrm{s}, \mathrm{CH}_{3}\right) ; 3.67\left(3 \mathrm{H}, \mathrm{s}, \mathrm{OCH}_{3}\right) ; 3.97(3 \mathrm{H}, \mathrm{s}$, $\left.\mathrm{OCH}_{3}\right) ; 6.73\left(1 \mathrm{H}, \mathrm{s}, \mathrm{H}_{\mathrm{Ar}}\right) ; 6.93\left(2 \mathrm{H}, \mathrm{d}, \mathrm{J}=8.8 \mathrm{~Hz}, \mathrm{H}_{\mathrm{Ts}}\right) ; 7.17\left(4 \mathrm{H}, \mathrm{s}, \mathrm{H}_{\mathrm{Ar}}\right) ; 7.30\left(1 \mathrm{H}, \mathrm{s}, \mathrm{H}_{\mathrm{Ar}}\right) ; 7.47(2 \mathrm{H}, \mathrm{d}$, $\left.\mathrm{J}=8.8 \mathrm{~Hz}, \mathrm{H}_{\mathrm{Ts}}\right) ; 10.07(1 \mathrm{H}, \mathrm{s}, \mathrm{NH})$

Anal. calc. for $\mathrm{C}_{23} \mathrm{H}_{23} \mathrm{NO}_{5} \mathrm{~S}: \mathrm{C} 64.94, \mathrm{H} 5.41, \mathrm{~N} 3.29$; found C 65.09, H 5,50, N 3.19.

## Reference

1. Tietze, L.F.; Eicher, T. Reactionen und Synthesen im organisch-chemischen Praktikum und Forschungslaboratorium Georg Thieme Verlag Stuttgart, New York, 1991.

Sample availability: available from the authors and MDPI.
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