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Chromium (VI) Oxide Catalyzed Oxidation of Sulfides to Sulfones with Periodic Acid

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Table of Contents

	<u>page</u>
General Information	S3
References for Physical and Spectral Data of Known Sulfones (2a-r , 2t-z)	S3-S4

General Information

- The spectral data (^1H NMR, ^{13}C NMR and IR) and physical data (mp) of sulfones **2a-r**, and **2t-z** were consistent with the data previously reported in the literature. The reference for each known sulfone is listed below.

Methyl phenyl sulfone (2a)

Sato, K.; Hyodo, M.; Aoki, M.; Zheng, X.; Noyori, R. *Tetrahedron*, **2001**, *57*, 2469.

Trifluoromethyl phenyl sulfone (2b)

Singh, R. P.; Cao, G.; Kirchmeier, R. L.; Shreeve, J. M. *J. Org. Chem.* **1999**, *64*, 2873.

4-Fluorophenyltrifluoromethylsulfone (2c)

Beaumont, A. J.; Clark, J. H. *J. Fluorine Chem.* **1991**, *52*, 295.

4-Methylsulfonyl benzonitrile (2d)

Creary, X.; Sky, A. F.; Phillips, G.; Alonso, D. E. *J. Am. Chem. Soc.* **1993**, *115*, 7584.

Di-*p*-nitrophenyl sulfone (2e)

Sato, K.; Hyodo, M.; Aoki, M.; Zheng, X.; Noyori, R. *Tetrahedron*, **2001**, *57*, 2469.

Dibenzothiophene-5,5-dioxide (2f)

Sato, K.; Hyodo, M.; Aoki, M.; Zheng, X.; Noyori, R. *Tetrahedron*, **2001**, *57*, 2469.

Thianthrene, 5,5,10,10-tetraoxide (2g)

Palazzo, S.; Giannola, L. I.; Caronna, S. *J. Heterocycl. Chem.* **1974**, *11*, 839.

Pentafluorophenyl sulfone (2h)

Rozen, S.; Bareket, Y. *J. Org. Chem.* **1997**, *62*, 1457.

Saccharin (2i)

Compared to an authentic sample purchased from Aldrich Chemical Co. Milwaukee, WI

4-(Methylsulfonyl)phenol (2j)

Farrow, S. N.; Jones, A. S.; Kumar, A.; Walker, R. T.; Balzarini, J.; De Clercq, E. *J. Med. Chem.* **1990**, *33*, 1400.

4-Methylsulfonyl-3-methyl phenol (2k)

Terreni, M.; Pregnolato, M.; Resnati, G.; Benefenati, E. *Tetrahedron*. **1995**, *51*, 7981.

2-Phenylsulfonyl ethanol (2l)

Sato, K.; Hyodo, M.; Aoki, M.; Zheng, X.; Noyori, R. *Tetrahedron*, **2001**, *57*, 2469.

4-Methylsulfonyl benzaldehyde (2m)

Fringuelli, F.; Pellegrino, R.; Piermatti, O.; Pizzo, F. *Synth. Commun.* **1994**, 24, 2665.

4-Methylsulfonyl benzyl alcohol (2n)

Kidd, D. A. A.; Wright, D. E. *J. Chem. Soc.* **1962**, 1420.

2-Methylsulfonyl naphthalene (2o)

Minami, T.; Tokumasu, S.; Hirao, I. *Bull. Chem. Soc. Jpn.* **1985**, 58, 2139.

Benzyl phenyl sulfone (2p)

Choi, S.; Yang, J.; Ji, M.; Choi, H.; Kee, M.; Ahn, K. H.; Byeon, S. H.; Baik, W.; Koo, S. *J. Org. Chem.* **2001**, 66, 8192.

2-Methyl *p*-tolylsulfone (2q)

Rozen, S.; Bareket, Y. *J. Org. Chem.* **1997**, 62, 1457.

Di *tert*-butyl sulfone (2r)

Rozen, S.; Bareket, Y. *J. Org. Chem.* **1997**, 62, 1457.

Methoxy methyl phenyl sulfone (2t)

Rozen, S.; Bareket, Y. *J. Org. Chem.* **1997**, 62, 1457.

1,3-Dithiane, 2-phenyl-, 1,1,3,3-tetraoxide (2u)

Atkinson, E.; Beer, R. J. S.; Harris, D.; Royall, D. J. *J. Chem. Soc. C.* **1967**, 638.

Phenyl vinyl sulfone (2v)

Compared to an authentic sample purchased from Aldrich Chemical Co. Milwaukee, WI

Allyl phenyl sulfone (2w)

Venier, C. G.; Squires, T. G.; Chen, Y.; Smith, B. F. *J. Org. Chem.* **1982**, 47, 3773.

Phenyl propargyl sulfone (2x)

Denmark, S.; Harmata, M. A.; White, K. S. *J. Org. Chem.* **1987**, 52, 4031.

4-Chloro-2-methylsulfonyl pyrimidine (2y)

Hurst, D. T.; Johnson, M. *Heterocycles.* **1985**, 23, 611.

2-(Methylsulfonyl)benzothiazole (2z)

Orjales, A.; Bordell, M.; Rubio, V. *J. Heterocyclic. Chem.* **1995**, 32, 707.