## Supporting information for:

## Ti(IV)-Amine Triphenolate Complexes as Effective Catalysts for Sulfoxidation

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Figure S1. ESI-MS of ion A obtained by obtained by direct injection of a solution 10<sup>-5</sup> M of complex 2c in CD<sub>3</sub>OD.

Figure S2. Experimental (A) and calculated (B) isotopic distribution for ion A. (10<sup>-5</sup> M in CD<sub>3</sub>OD).

<sup>1</sup>H NMR (CDCl<sub>3</sub>, 300 MHz) complex **2c** 

<sup>1</sup>H NMR (CDCl<sub>3</sub>, 300 MHz) complex 2c + 35% H<sub>2</sub>O<sub>2</sub>

<sup>1</sup>H NMR (CD<sub>2</sub>Cl<sub>2</sub>, 300 MHz) complex **2c** 

<sup>1</sup>H NMR (CD<sub>2</sub>Cl<sub>2</sub>, 300 MHz) complex 2c + 35% H<sub>2</sub>O<sub>2</sub>

<sup>1</sup>H NMR (CD<sub>3</sub>CN, 300 MHz) complex **2c** 

<sup>1</sup>H NMR (CD<sub>3</sub>CN, 300 MHz) complex 2c + 35% H<sub>2</sub>O<sub>2</sub>

<sup>1</sup>H NMR (acetone- $d_6$ , 300 MHz) complex **2c** 

<sup>1</sup>H NMR (acetone- $d_6$ , 300 MHz) complex **2c** + 35% H<sub>2</sub>O<sub>2</sub>

<sup>1</sup>H NMR (CD<sub>3</sub>OD, 300 MHz) complex **2c** 

<sup>1</sup>H NMR (CD<sub>3</sub>OD, 300 MHz) complex 2c + 35% H<sub>2</sub>O<sub>2</sub>

**Figure S1**. ESI-MS of ion **A** obtained by obtained by direct injection of a solution  $10^{-5}$  M of complex **2c** in CD<sub>3</sub>OD.



**Figure S2**. Experimental (A) and calculated (B) isotopic distribution for ion **A**. Obtained from direct injection ESI-MS experiment on complex 2c (R= t-Bu) ( $10^{-6}$  M in CD<sub>3</sub>OD).



**A** R = *t*-Bu





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