



*Catalogue 2013*

## METALLIC SALTS

| REF.   | SELS   | QUANTITE                          |
|--------|--|-----------------------------------|
| M1133B | <b>Sodium (I) bis(fluorosulfonyl)imide 99.7%</b><br>NaN(SO <sub>2</sub> F) <sub>2</sub> ; fw : 203,30<br>H <sub>2</sub> O ≤ 50ppm  | 10g<br>50g                        |
| S001   | <b>Lithium (I) Bis(trifluoromethanesulfonyl)imide 99%</b><br>LiC <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ; fw : 287,10<br>H <sub>2</sub> O ≤ 5000ppm                    | 50g<br>100g<br>500g<br>1kg        |
| S001A  | <b>Lithium (I) Bis(trifluoromethanesulfonyl)imide 99.9%</b><br>LiC <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ; fw : 287,10<br>Extra-Dry H <sub>2</sub> O ≤ 20ppm          | 50g<br>100g<br>250g               |
| M1108C | <b>Sodium(I) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>NaC <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ; fw : 303,13<br>H <sub>2</sub> O ≤ 20ppm                      | 10g<br>50g<br>250g<br>500g<br>1kg |
| M1208C | <b>Magnésium(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Mg(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 584,59<br>H <sub>2</sub> O ≤ 250ppm | 10g<br>50g<br>250g<br>500g<br>1kg |
| M1908C | <b>Potassium(I) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>KC <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ; fw : 319,14<br>H <sub>2</sub> O ≤ 250ppm                   | 10g<br>50g<br>250g<br>500g<br>1kg |
| M2008C | <b>Calcium(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Ca(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 600,38<br>H <sub>2</sub> O ≤ 250ppm   | 10g<br>50g<br>250g<br>500g<br>1kg |
| M2508C | <b>Manganèse(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Mn(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 615,22<br>H <sub>2</sub> O ≤ 250ppm | 10g<br>50g<br>250g<br>500g        |
| M2708C | <b>Cobalt(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Co(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 619,28<br>H <sub>2</sub> O ≤ 20ppm     | 10g<br>50g<br>250g                |
| M2808C | <b>Nickel(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Ni(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 618,98<br>H <sub>2</sub> O ≤ 20ppm     | 10g<br>50g<br>250g                |

| REF.   | SELS   | QUANTITE                          |
|--------|--|-----------------------------------|
| M2908C | <b>Cuivre(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Cu(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 623,82<br>H <sub>2</sub> O ≤ 20ppm     | 10g<br>50g<br>250g<br>500g<br>1kg |
| M3008C | <b>Zinc(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Zn(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 697,61<br>H <sub>2</sub> O ≤ 20ppm       | 10g<br>50g<br>250g<br>500g<br>1kg |
| M5508C | <b>Césium(I) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>CsC <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ; fw : 413,05<br>H <sub>2</sub> O ≤ 20ppm                      | 10g<br>50g<br>250g                |
| M5608C | <b>Baryum(II) Bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Ba(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>2</sub> ; fw : 697,61<br>H <sub>2</sub> O ≤ 250ppm    | 10g<br>50g<br>250g<br>500g<br>1kg |
| M5708C | <b>Lanthanum(III) bis(trifluoromethanesulfonyl)imide 99.5%</b><br>La(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>3</sub> ; fw : 979,42<br>H <sub>2</sub> O ≤ 20ppm | 10g<br>50g<br>250g                |
| M5808C | <b>Cérium(III) bis(trifluoromethanesulfonyl)imide 99.5%</b><br>Ce(C <sub>2</sub> F <sub>6</sub> NO <sub>4</sub> S <sub>2</sub> ) <sub>3</sub> ; fw : 983,54<br>H <sub>2</sub> O ≤ 20ppm    | 10g<br>50g<br>250g                |

### Custom Formulations:

Custom-made formulations based on these salts dissolved in ionic liquids and/or conventional organic solvents can be provided on demand.



For more information or BULK packing, please contact us: [Sales@solvionic.com](mailto:Sales@solvionic.com)

## Applications – Metallic Salts

■ Electrolytes for batteries (Ca-ion, Na-ion, Mg-ion, Li-ion, ...)

■ Electrodeposition of oxydes and metals

■ Catalysis

## Examples

### Nanocrystals electrodeposition of metallic oxides

#### **Electrodeposition of ZnO in Ionic liquid environment<sup>[1]</sup>**

ZnO is deposited from an electrolyte of (Zn II) TFSI Zinc (II) Bis(trifluoromethanesulfonyl) imide (Ref. M3008c) dissolved in 1-butyl-3-methylpyrrolidinium Bis(trifluoromethanesulfonyl)imide (Pyr14TFSI - ref. Pyr0408a) saturated in O<sub>2</sub>.

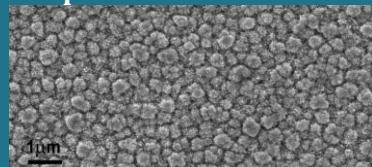
The anion of the Ionic liquid and the salt being the same (TFSI), the following advantages are observed:

- Good solubility of Zinc salt (II)
- Homogeneous solution in Zn (II)
- No formation of hydroxides of Zn

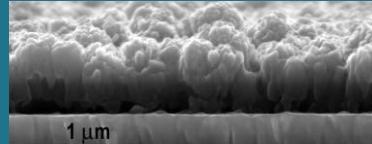
#### **Nanocrystalline film ZnO electrodeposited on FTO**

*Deposit obtained in 150°C in Ionic liquid environment.*

∅ Top view



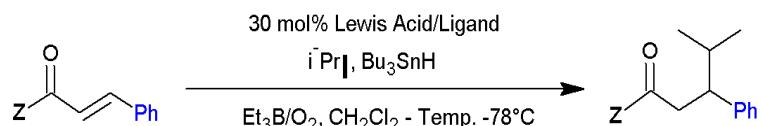
⌚ Seen in section



### Catalysis

#### **Reaction enantioselective catalysed by a metallic salt triflimide<sup>[2]</sup>**

Mukund P. Sibi and Al showed that triflimides salts are Lewis's excellent Acids and of reagent ideal for the chiral catalysis.



Triflimides salts favor:

- Lewis's excellent Acids
- Chemical efficiency & enantioselective
- Good stability
- Strong solvent power with the not polar organic solvents

| Z | Lewis Acid                         | Yield , % | ee , % |
|---|------------------------------------|-----------|--------|
|   | Mg(NTF <sub>2</sub> ) <sub>2</sub> | 99↗       | 98↗    |
|   | Mg(ClO <sub>4</sub> ) <sub>2</sub> | 91        | 94     |
|   | Mg(NTF <sub>2</sub> ) <sub>2</sub> | 95↗       | 98↗    |
|   | Mg(ClO <sub>4</sub> ) <sub>2</sub> | 87        | 98     |
|   | Mg(NTF <sub>2</sub> ) <sub>2</sub> | 80↗       | 14↗    |
|   | Mg(ClO <sub>4</sub> ) <sub>2</sub> | 62        | 02     |

[1] E. Azaceta et al., *Electrochim. Commun.* 11 (2009) p.2184

[2] Mukund P. Sibi et Al., *Tetrahedron : Asymmetry* 14 (2003) 2879-2882