

## LDA preparation from DIPA and Li metal

	Molecular weight	mol	Quantity	Equiv
Isoprene	68.12 g/mol (0.681 g/ml)	0.08	8.0 ml	0.5
Li <sup>0</sup>	6.941 g/mol	0.16	1.11 g	1.0
DIPA	101.19 g/mol (0.717 g/ml)	0.16	23 ml	1.0
DMEA	73.14 g/mol (0.675 g/ml)	/	110 ml	/

### **Materials:**

**Isoprene:** purchased from Aldrich, 99% purity, inhibited with catechol distilled from molecular sieves.

**Li<sup>0</sup>:** granular lithium, 99.9+ % from Acros - stored in glove box.

**DIPA:** Diisopropylamine was recrystallized from HCl salt, distilled and dried over sodium/benzophenone as a purple solution.

**DMEA:** Dimethylethylamine was purchased from Aldrich and distilled and dried over sodium/benzophenone as a purple solution.

### **Procedure:**

Isoprene was dissolved in 30 ml dry DMEA and added over 1 hour via syringe pump to a solution of lithium and diisopropylamine in 80 ml DMEA at 35 °C. The reaction exotherms if isoprene is added too quick. Temperatures in excess of 35 °C will give rise to dark yellow and purple coloration. This is to be avoided.

Note: A slight excess in DIPA or Li<sup>0</sup> of up to 1.1 equivalents will cause no loss in yield. However, do not add more than 0.5 equivalents of isoprene.

The reaction is carried out in a 250 ml Schlenk flask with attached fine swivel frit and a receiving 250 ml Schlenk flask.

After addition of isoprene almost all the lithium had already reacted. After continued stirring at 35 °C for one hour, the mixture was slowly filtered through a fine frit and evaporated to dryness.