

## Supplementary Information

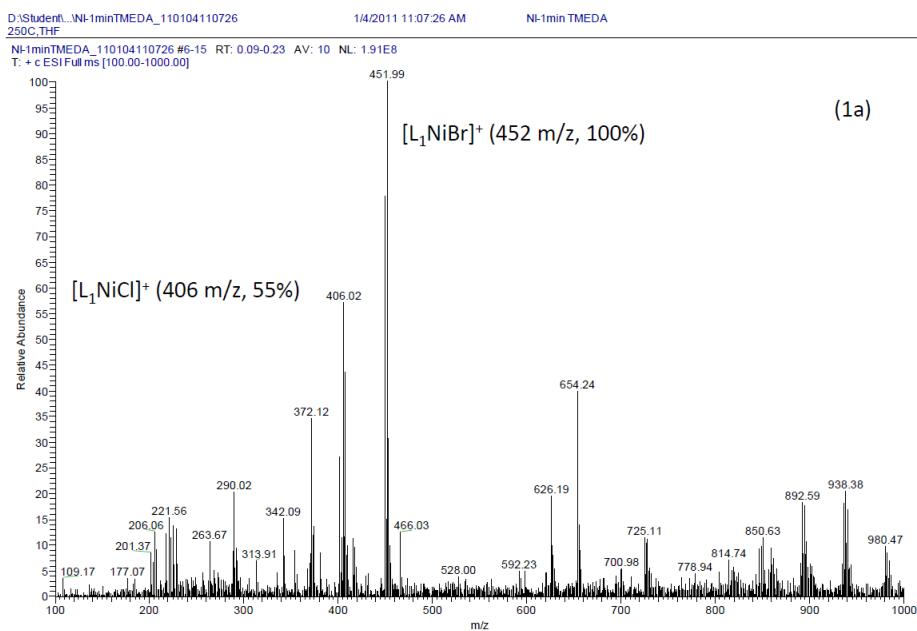
### Cross-Coupling of Alkyl Halides with Aryl or Alkyl Grignards Catalyzed by Dinuclear Ni(II) Complexes Containing Functionalized Tripodal Amine-Pyrazolyl Ligands

Fei Xue,<sup>a</sup> Jin Zhao<sup>\*a,b</sup> and T. S. Andy Hor<sup>\*a,b</sup>

<sup>a</sup> Department of Chemistry, National University of Singapore, 3 Science Drive 3, Singapore 117543, Singapore. E-mail: andyhor@nus.edu.sg; chmzhaoj@nus.edu.sg

<sup>b</sup> Institute of Materials Research and Engineering, Agency for Science, Technology and Research, 3 Research Link, Singapore 117602, Singapore

#### ESI-MS spectra



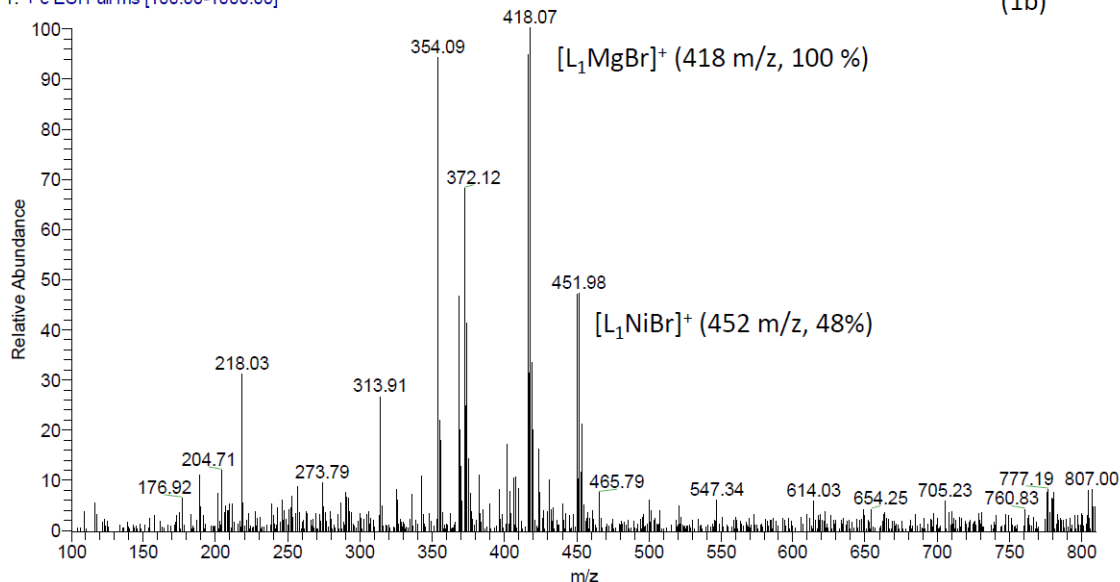
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200C,CH3CN

1/4/2011 10:58:24 AM

NI-5minTMEDA

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(1b)



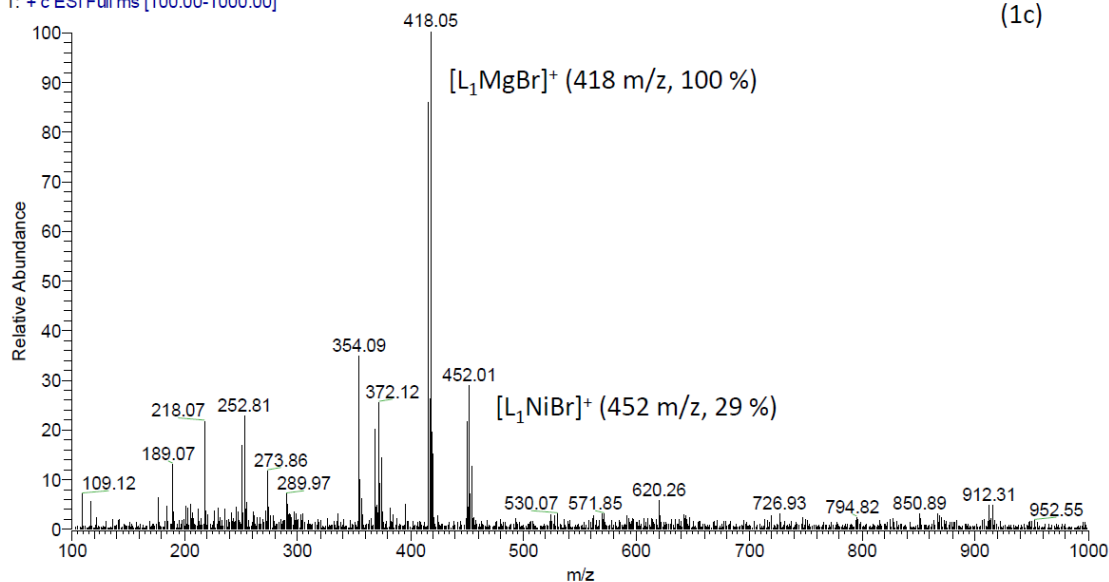
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250C,THF

1/4/2011 11:23:59 AM

NI-15minTMEDA

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(1c)



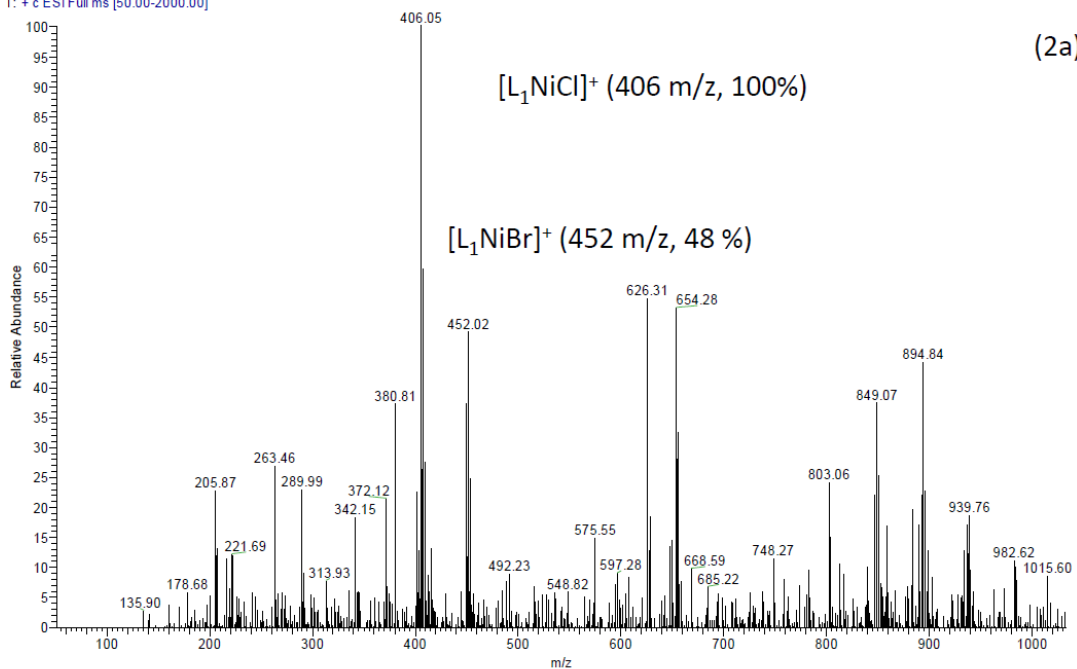
**Figures 1a-c:** The positive mode ESI-MS spectra of the reaction mixture after PhMgBr (1.0 mmol) with TMEDA (0.3 mmol) in 3 mL THF was added dropwise to the mixture of 1-bromooctane (0.5 mmol) and 5 mol % of **1** in 1mL THF at r.t for 1 min (1a), 5 min (1b) and 15 min (1c).

D:\Student\XUE FEM1-1minnew  
THF\_200C

2/7/2011 11:08:02 AM

1-1minnew

1-1minnew #4 RT: 0.11 AV: 1 NL: 1.38E8  
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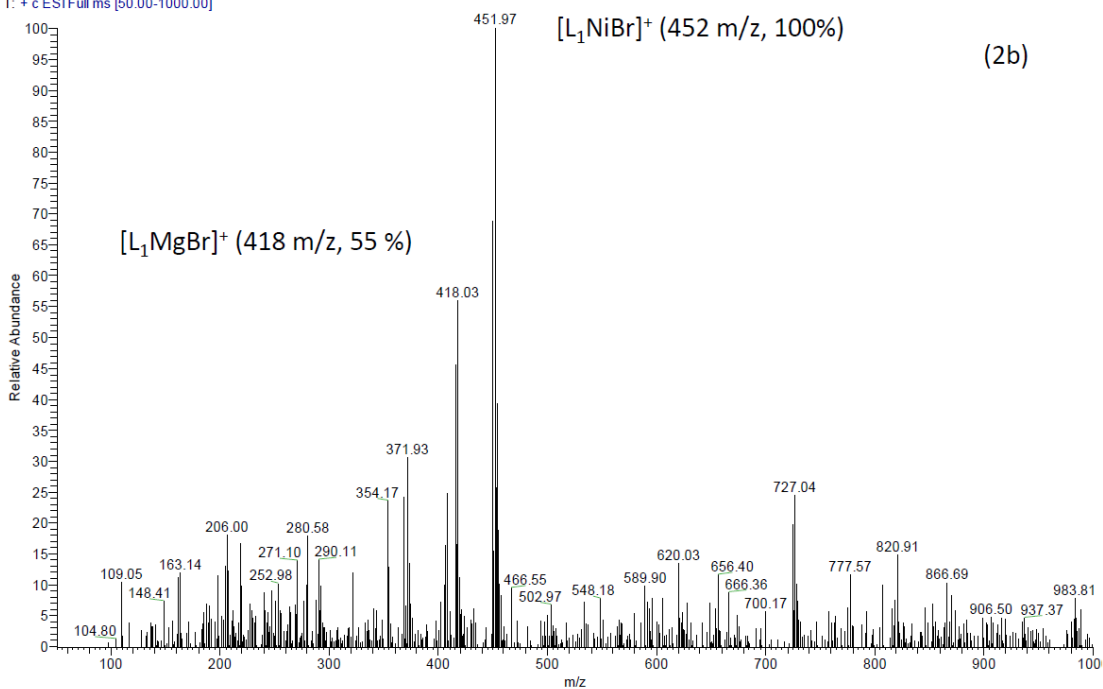


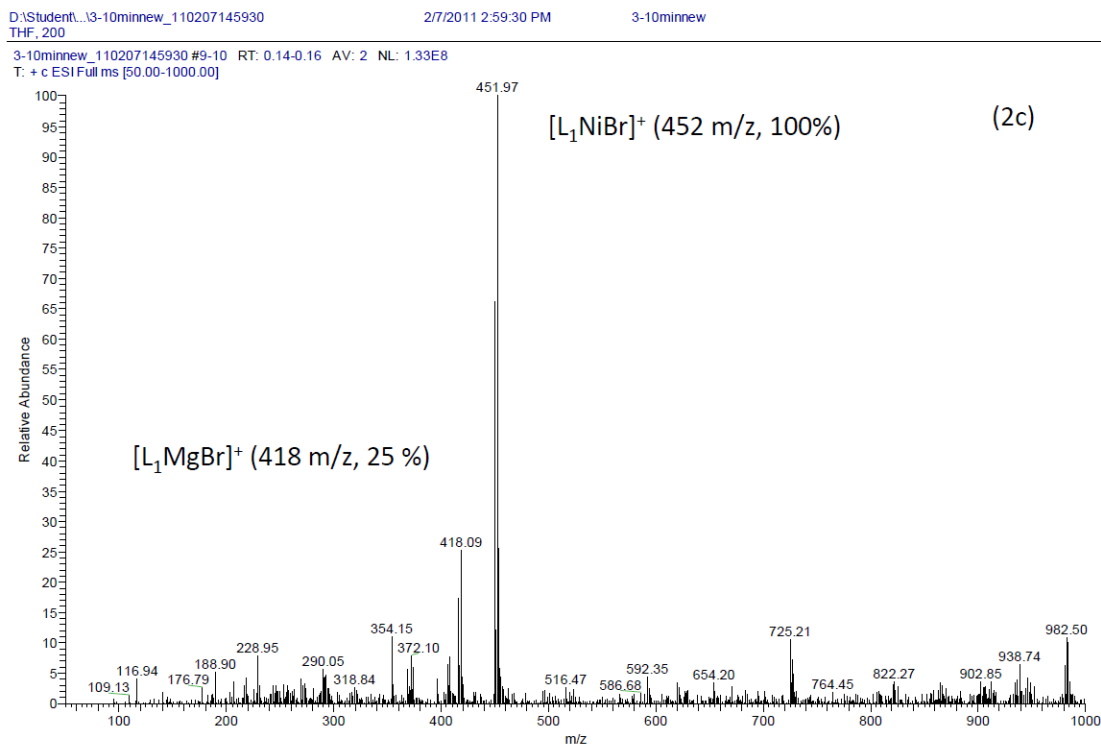
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THF\_200

2/7/2011 2:57:08 PM

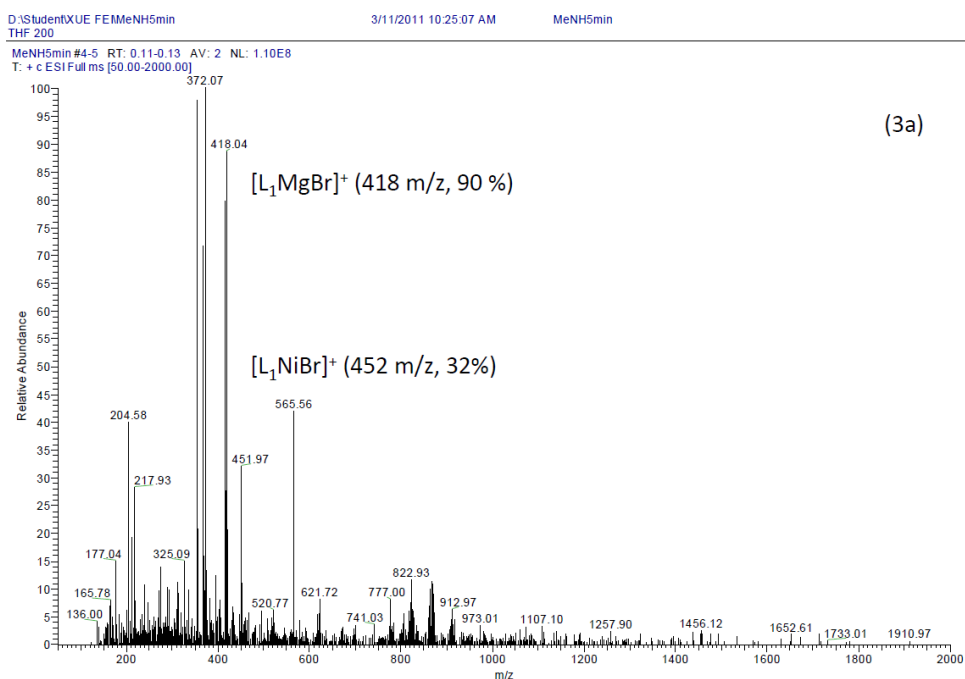
3-5minnew

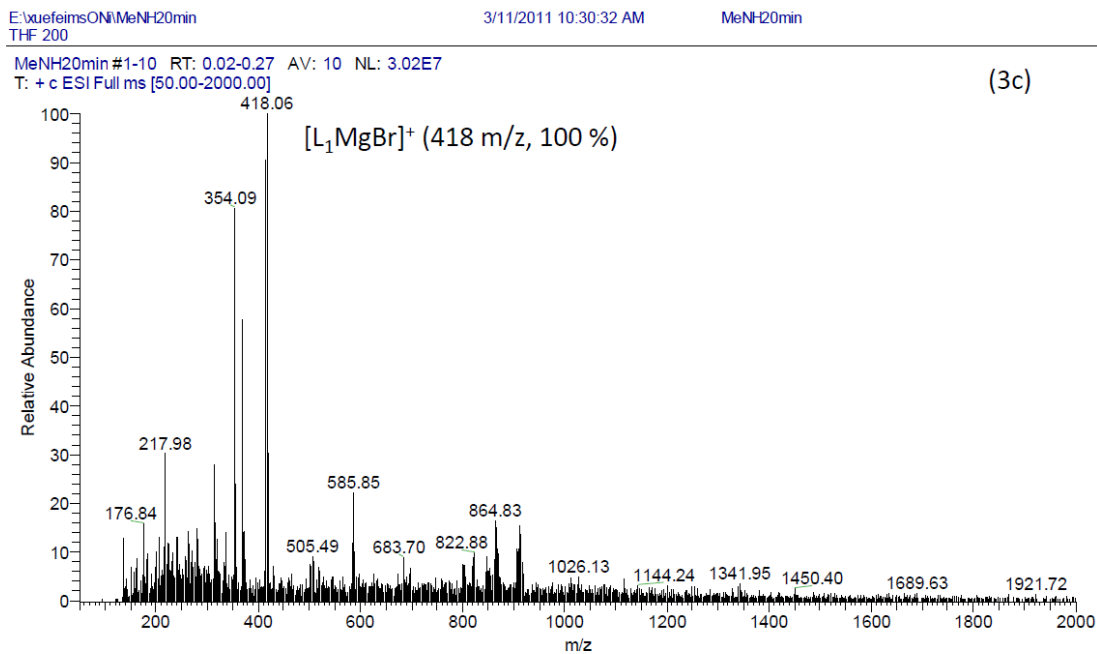
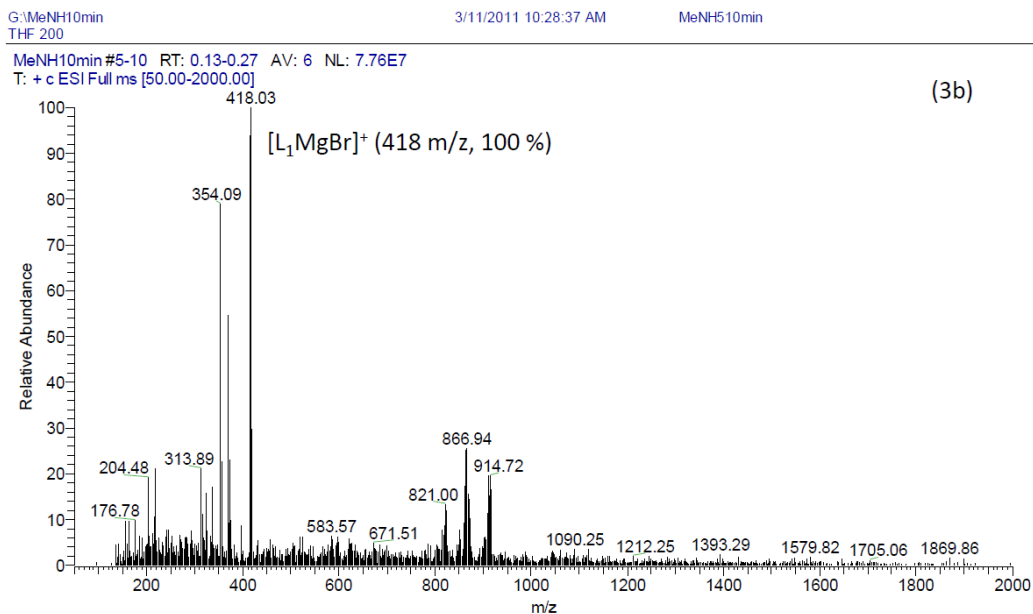
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T: + c ESI Full ms [50.00-1000.00]





**Figures 2a-c:** The positive mode ESI-MS spectra of the reaction mixture after PhMgBr (1.0 mmol) (without any additives) in 3 mL THF was added dropwise to the mixture of 1-bromooctane (0.5 mmol) and 5 mol % of **1** in 1mL THF at r.t for 1 min (2a), 5 min (2b) and 10 min (2c).





**Figures 3a-c:** The positive mode ESI-MS spectra of the reaction mixture after PhMgBr (1.0 mmol) with DMEDA (0.3 mmol) in 3 mL THF was added dropwise to the mixture of 1-bromooctane (0.5 mmol) and 5 mol % of **1** in 1 mL THF at r.t for 5 min (3a), 10 min (3b) and 25 min (3c).