Experimental report

14/02/2018

Proposal: 7-01-453 **Council:** 10/2016

Title: Microscopic origin of the Li superionic conduction in Li4C60 fulleride

Research area: Materials

This proposal is a new proposal

Main proposer: **Stephane ROLS**

Experimental team: Tetiana NAGORNA
Aljosa HAFNER
Chiara CAVALLARI
Petr DOLEZAL
Andrea KIRSCH
Pelle GARBUS
Troels Lindhal CHRISTIANSEN
Giovanni MACETTI
Cettina BOTTARI

Local contacts: Stephane ROLS
Bernhard FRICK

Samples: LI4C60

Instrument	Requested days	Allocated days	From	To
IN4	6	3	05/03/2017	08/03/2017
IN5	4	0		
IN16B	6	3	05/12/2016	08/12/2016

Abstract:

The goal of this proposal is to correlate the temperature dependence of some phonons modes specific to the Li4C60 polymeric carbon backbone to the Li ionic diffusion. There is therefore need for coupling INS investigations that we propose to perform on the IN4C spectrometer to QENS measurements that we propose on IN16B. This will shed some light onto the microscopic origin of the very large Li diffusion in this material.

NOTE: This is a CONTINUATION proposal of 7-07-272 performed on IN6 in 2007. It was NOT possible to indicate it is a proposal in the system as "7-07" does not exist anymore. However, the experimental report was provided by the author a long a time ago.

To be submitted soon.