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Editorial

The mobility and diffusivity of ions in solids is a vital topic for fundamental as well as application-inspired research. The Bunsen Colloquium 2017 entitled *Mobility of Ions in Solids* follows previous Bunsen Colloquia in this area held in Hannover in 2014, 2011 and 2009 and is conceived, on the one hand, as the final colloquium of the DFG Research Unit FOR 1277 *Mobilität von Lithiumionen in Festkörpern (molife).* Molife is devoted to the fundamentals of Li diffusion and transport – both fast and slow – in crystalline and amorphous ceramics, being studied by a large variety of experimental and theoretical methods, see www.for1277molife.uni-hannover.de. It has been running since 2010 with Leibniz Universit¨at Hannover (as speaker university) and the (Technical) Universities Berlin, Bonn, Clausthal, Graz and Oldenburg. The final scientific report of the Research Unit 1277 will appear in summer 2017 in the frame of another themed issue of Zeitschrift f¨ur Physikalische Chemie. Previous issues related to work within *molife* are Z. Phys. Chem. 229 (9) 2015 and Z. Phys. Chem. 226 (5 & 6) 2012.

On the other hand – beyond *molife*, the Bunsen Colloquium is intended to broaden the scope from lithium ion diffusion to the dynamics of other ions like alkali, fluoride or oxygen ions from the fundamental as well as application-oriented points of view. Like for Li, applications of ‘post Li’ ion conductors often eventually aim at electrochemical energy storage devices or sensors.

I am very grateful to the authors from *molife* and friendly groups beyond for their oral and poster contributions of which the abstracts are collected in this booklet.

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