Physical Chemistry Research Group at the University of Rostock Awarded with Cover Page of Renowned Journal ChemPhysChem

The research group led by Professor Ralf Ludwig from the Department of Physical Chemistry at the University of Rostock has again been awarded a cover page of the renowned journal ChemPhysChem. The researchers, who have only recently started working in the newly finished second building of the Institute of Chemistry, report in the current issue of the journal ChemPhysChem on joint work with their Russian colleagues from Novosibirsk University and the Akademgorodok Science Institute. The paper on so-called isotope effects was very positively reviewed and even made it to the cover.

The paper reports on isotope effects that significantly change the structure and dynamics in ionic liquids. This is a surprising result given that isotopes that only differ in the number of neutrons should not actually exhibit significantly different properties. The new findings are significantly relevant for experiments based on the assumption that differently isotope-labeled compounds usually exhibit the same chemistry and physics. Especially on hydrogen bonds the exchange of a hydrogen atom H by a deuteron D has a strong influence. It is therefore known that in water D2O shows a density maximum at higher temperatures than H2O.

The page cover is accompanied by a so-called cover profile, in which the two research teams present the genesis of their mutual work leading to the exciting results. "We are particularly pleased that Dr. Daniil Kolokolov’s stay at the University of Rostock as a Humboldt Fellow has been so fruitful," explains Ralf Ludwig, promising more to come. The Humboldt researcher had been supported four years ago through a Mare Balticum Fellowship of the Interdisciplinary Faculty of the University of Rostock, which was the initial spark for the establishment of this cooperation.

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Cover of the current issue of the journal ChemPhysChem: The cover illustrates the isotope effects in ionic liquids described in the article.