

## ***Interactive comment on “MIMiX: A Multipurpose In-situ Microreactor system for X-ray microspectroscopy to mimic atmospheric aerosol processing” by Jan-David Förster et al.***

### **Anonymous Referee #2**

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This work reports a new microreactor system for X-ray microscopy, which facilitates observations under in-situ conditions and extends the accessible parameter ranges of previously reported setups to very high humidities and low temperatures. The authors present the design and analytical scope of the system, along with results from hydration experiments on ammonium sulfate and the observation of water ice at low temperature and high relative humidity in a secondary organic aerosol particle from isoprene oxidation. The work is of scientific significance, and conclusions well supported by the data. It can be accepted after addressing the following issues: 1. What is the time resolution and space resolution for the measurements. 2. The authors mentioned that "We could not detect any carbonaceous contaminants from potential outgassing

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of the O-rings, from the lubricant or from the glued components", more evidences are needed for this claim. 3. Is it possible to perform in-situ heterogeneous reaction study using this equipment?

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