

Professor Torben R. Jensen and co-workers publish in Nature Communications.

In the work presented by Mark Paskevicius, Bjarne R. S. Hansen, Mathias Jørgensen, Bo Richter and Prof. Torben R. Jensen, silver boranes ($\text{Ag}_2\text{B}_{12}\text{H}_{12}$, $\text{Ag}_2\text{B}_{10}\text{H}_{10}$) are shown to be highly ion conducting and are semiconductors. Upon substitution with silver iodide, forming new structures, the ion conductivity is greatly enhanced also at room temperature. The silver boranes were characterized using transmission electron microscopy (TEM) and exhibit extremely fast silver-filament growth, when exposed to the electron beam of the microscope. The Ag-filament formation – reabsorption has been captured in real time, by recording a series of TEM images to construct video material for the supplementary information. This work represents an elegant example of synthetically tailoring multifunctional materials, and taking advantage of world class research facilities to achieve extraordinary results (DOI: 10.1038/NCOMMS15136).

Read more here: *Nature Communications* **8**, Article number: 15136 (2017)
<https://www.nature.com/articles/ncomms15136>

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