

Friday, Jan 30, 2026 

14:00 h 

RUN Auditorium 



### **Prof. Dr. Renske M. van der Veen**

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### ***Fast electrons and hard X-rays for unraveling atomic-scale dynamics in light-energy conversion***

The increasing demand for renewable and low-cost energy motivates intensive research aimed at characterizing and optimizing materials that can efficiently convert (sun) light into usable energy in the form of electricity or chemical fuels. Conventional characterization techniques either lack the spatial resolution necessary to resolve individual atoms, or they lack the temporal resolution required to capture structural rearrangements as they evolve. Our group develops complementary X-ray and electron-based tools to visualize light-induced processes in materials on atomic length and time scales. In this talk I will introduce you to the techniques of ultrafast/time-resolved X-ray spectroscopy and transmission electron microscopy and provide several examples of how these techniques can be used in the fields of solar energy and catalysis.

Coffee & Discussion