
S E M I N A R
on
Semiconductor Physics and Nanotechnology

Mo, 23.11.2026, 11:15 Uhr,

**Seminar in
person in the physics lecture hall or via Zoom**

**“Nanoconfined water:
possible pathway to sustainable energy storage”**

Dr. Alexander Ryzhov

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Nanoconfined water inside 1-nm channels exhibits physical dynamics fundamentally distinct from bulk water, characterized by dielectric anisotropy and enhanced proton transport. Harnessing these properties enables the realization of a "blue capacitor," an energy storage architecture operating with pure nanoconfined water as the sole electrolyte. This seminar explores how the degree of physical confinement influences blue capacitor performance and highlights viable engineering pathways toward scalable manufacturing and practical deployment for grid-level energy storage.

Zoom – Link:

<https://zoom.us/j/96375934537?pwd=RTIKTWWhSdzRHU211YTY1bGFxTUtpZz09>

[Meeting-ID: 963 7593 4537](#)

[Kenncode: =r=4YQ](#)