

Title: "Water Bridging Initiative - from descaling drinking water to disarming resistant microbes to liquid crystal properties"

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Abstract:

The Water Bridging Initiative seeks to connect people, ideas and technology within the emerging field of water structure and its relevance for energy, environment and biology. The field is supported by leading edge scientific discoveries, now indicating that water consists of two simple, but different liquids [1].



Applications of this new knowledge and of a number of devices, whose functioning principle are only beginning to be understood, range from descaling of hard water to demulsifying effects to microbial inhibition.

Initially funded by a Villum Foundation Experiment grant (DireWaves) to study the effect of resonant electromagnetic waves on antibiotic-resistant bacteria, the Water Bridging Initiative now also includes a study of an anti-limescaling device supported by an EU regional grant (KARAKALK) and the VILLUM grant WATERSTRUC on examining liquid crystal properties of water[2].

The approach is trans-disciplinary, implying that groups such as inventors, entrepreneurs and artists also play an important role in deciphering the unusual properties of water.

[1] Kim KH et al. Maxima in the thermodynamic response and correlation functions of deeply supercooled water. Science. 2017 358(6370)

[2] <http://www.cere.dtu.dk/research-and-projects/research-projects/wbp>