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Detection of the first order phase transition in water with carbon nanotube layer VLADIMIR SAMUILOV, Department of Materials Science & Engineering, Sensor CAT, State University of New York at Stony Brook, Stony Brook, NY 11794-2275, USA, NIKOLAY POKLONSKI, Department of Physics, Belarus State University, Minsk 220000, Belarus — We have developed a new generation of the icing conditions sensors. These sensors are based on the detection of a molecular thin layer of absorbed water molecules, transforming into ice by detection of nonmonotonic variation of the resistance of the carbon nanotube sensor. Carbon nanotube layers could be utilized as an inexpensive and effective sensors of humidity and icing conditions, suitable for applications in aviation and different industries.

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