Department of Physics & Astronomy

PHYSICS NEWS FLASH

Professor Hanno Weitering's Work Picked as a 2006 Highlight

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Professor Hanno Weitering's work on atom wires has been selected as one of last year's scientific highlights for *Physics News in 2006**, a supplement to the *APS News* for February 2007.

Dr. Weitering's collaboration with colleagues from the Delft University of Technology in Holland resulted in the world's thinnest gold necklaces—measuring only one atom wide. Such atom wires are the smallest imaginable interconnects in futuristic nanoscale electrical circuits. Using a scanning tunneling microscope, Dr. Weitering and his fellow scientists visualized a fundamental quantum mechanical property of these ultra-small wires, showing how electrons collectively condense into a wave like pattern at low temperature. Understanding the collective properties of electrons in one-dimensional conductors is vital for the research on ultra-small chips that will ultimately be governed by the laws of quantum mechanics.

Only 38 items were selected for the 2006 highlights list, which was compiled from approximately 100 items appearing in the American Institute of Physics weekly newsletter, *Physics News Update*, over the past calendar year.