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Harvesting water from humidity of the air

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Lack of drinking water is one of the greatest problems of mankind. Our approach to this urgent problem is to harvest atmospheric water (dew) by using polymer films (LDPE/LLDPE) that are transparent to the atmospheric window at 8 to 13 micron. This allows cooling down a device just by looking through that window into the cold upper atmosphere. In 2006 we presented our ideas and first results using a device build by an absorber cooling down a water reservoir at night making use of radiation exchange and sampling water in the morning. (This will be published in JPCE, Elsevier coming shortly.) Here we present our second generation device which is directly sampling water at night. This device is much more simple to produce and gives the hope to become economic. It was tested in Summer 2007, first results are given. This project is funded by the German Federal Ministry of Education and Research (FKZ 02WD0458)