



Exploitation of Water from Air Moisture

Dieter F. Ihrig, Michael Licht, and Andreas Vach

University for Applied Sciences, Iserlohn, Germany, Interdisciplinary Center for Life Sciences, Iserlohn, Germany
(Ihrig@fh-swf.de, +49 2371 566-274)

One of the greatest problems is supplying the whole mankind with drinking-water. This is a typical Third-World-Problem. 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. First results of the first generation of devices are published in JPCE [1]. The prototype of a second generation device which is directly sampling water at night was tested in summer 2009 and 2010. It was possible to harvest up to 0,9 L/m² per day water. Results varying different conditions for example different air fluxes throw the sampler are shown. This project was funded by the German Federal Ministry of Education and Research (FKZ 02WD0458)

[1] D. F. Ihrig, M. Licht, U. Brunert & J. Eggemann: Winning drinking water using radiation exchange; Physics and Chemistry of the Earth, Elsevier, 33, 86-91