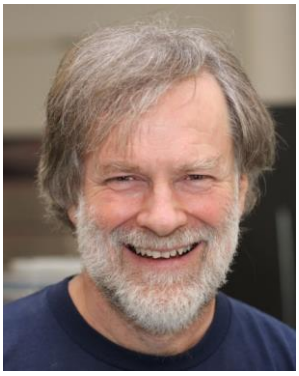
CV form Herbert Keppner



Born in 1954	Waldshut, Germany.
1976	studies at University of Konstanz, Diploma,
1987	PhD thesis in the field of solid state physics, solar cells, plasma technology.
1988 - 1998	Chief assistant at University of Neuchâtel in photovoltaic research, and applied plasma technology.
Since 1996:	Habilitation and Private-Docent at University of Neuchâtel.
Since 1998:	Professor in Microtechnology at University of Applied Science (HE-ARC)
	Lectures at Ecole Nationale Supérieure de Mécanique et des Microtechniques (ENSMM, Besançon, France) and University of Neuchâtel; plasma technology.
2008 – 2013	Lecture in Highlights in Microtecjnology, Summer School University of Neuchâtel, and EPFL
Since 2008	Lecture (master) microsystems in biomedical engineering University of Bern
Since 2012	Lectures in Photovoltaics for Master of advanced studies MAS

Numerous projects in the fields of biomedical engineering, energy harvesting systems, sensors and actuators, membranes. Coordinator of FP6 (MULTIPOL) and FP7 (PARYLENS) EU projects partner of a further FP7 (NANOCI) and a Swiss Polish project (ENERLIQ). Currently leading national projects (CTI) and internal University of applied Science projects.

Key activities at HE-ARC:

- All-polymer (mainly Parylene) microsystems based on patented Solid on Liquid deposition technique.
- Micro-device fabrication, especially piezoelectric and optoelectronic devices.

Over 130 publications in conference proceedings and journals, 10 patents.

Striking publications

1. Stella Kiel, Olga Grinberg, Nina Perkas, Jerome Charmet, **Herbert Kepner** and Aharon Gedanken ; Beilstein Journal of Nanotechnology ; Forming nanoparticles of water-soluble ionic molecules and embedding them into polymer and glass substrates ; 3, 267–276 (2012). doi:10.3762/bjnano.3.30

2. Maria Naddaka, Florian Asen, Sylwia Freza, Maciej Bobrowski, Piotr Skurski, Edith Laux, Jerome Charmet, **Herbert Keppner**, Monika Bauer, Jean-Paul Lelluche; *Functionalization of Parylene During Its Chemical Vapor Deposition*; Journal of Polymer Science A: Polymer Chemistry DOI 10.1002/POLA 24731; (June 2011).

3. N. Perkas, G. Amirian, O. Girshevitz, J. Charmet, E. Laux, G. Guibert, **H. Keppner**, and A. Gedanken. Modification of parylene film-coated glass with TiO2 nanoparticles and its photocatalytic properties. Surf. Coat. Tech (2010) doi:10.1016/j.surfcoat.2010.11.034.

4. Andreas Hogg, Thierry Aellen, Stefanie Uhl, Benjamin Graf, **Herbert Keppner**, Yanik Tardy and Jürgen Burger, Ultra-thin layer packaging for implantable electronic devices, Journal of Micromechanics and Microengineering, Volume 23, Number 7, IOP Publishing Ltd, doi.org/10.1088/0960-1317/23/7/075001 (May 2013).

5. YuZhiyong, **H. Keppner**, D. Laub, E. Mielczarski, J. Mielczarski, L. Kiwi-Minsker, A. Renken, J. Kiwi, Photocatalytic discoloration of Methyl Orange on innovative parylene TiO2 flexible thin films under simulated sunlight, Applied Catalysis B: Environmental 79, pp63–71, (2008).

6. **H. Keppner**, S. Uhl, E. Laux, L. Jeandupeux, J. Tschanz and T. Journot; Ionic Liquid-based Thermoelectric Generator: Links between Liquid Data and Generator Characteristics; accepted for publication in Elsevier Science direct Materials Today ; Proceedings of the 12th European Conference on Thermoelectrics Madrid 2014.

7. Alexandra Homsy, Edith Laux, Laure Jeandupeux, Jerome Charmet, Roland Bitterli, Chiara Botta, Yves Rebetez, Oksana Banakh, **H. Keppner** ; Solid on liquid deposition, a review of technological solutions in Microelectronic Engineering 141 (2015) 267-270.

Publications in the field optoelectronics, photovoltaics:

8 S. Bausch, B. Sailer, **H. Keppner**, G. Willeke, E. Bucher, "Preparation of Pyrite Films by Plasma-assisted Sulfurization of Thin Iron Films", *Appl. Phys. Lett.*, July 1990, Vol. 57 (1), pp. 25-27.

9 J. Meier, R. Flückiger, **H. Keppner**, and A. Shah, "Complete Microcrystalline p-i-n Solar Cell-Crystalline or Amorphous Cell Behavior", *Appl. Phys. Lett.* 65(7), p. 860 (1994)

10 **H. Keppner,** J. Meier, P. Torres, D. Fischer, A. Shah Microcrystalline silicon and micromorph solar cells; *Appl. Physics A, 69 (1999) 169-177.*

11 Shah A., Torres P., Tscharner R., Wyrsch N., **Keppner H.**, Photovoltaic Technology : the case for Thin –Film solar Cells. *Science 285(5427) (1999) 692-8.*

Patents

1 **H. Keppner,** M. Benkhaira, *Method for producing a device having a plastic membrane and device so manufactured,* PCT/EP2005/056499, published 2007.

2 Goetz Michael, Hotz Walter, **Keppner Herbert**: (En) Coating substrate. / (De) Beschichtungssubstrat. Alusuisse Technology & Management October 1997: WO 1997/038145

3 Fischer Diego, Torres Pedro, **Keppner Herbert**: Photovoltaic product and process of fabrication hereof. Vhf Technologies April 2004: EP1411556

4 **Keppner Herbert**: Photovoltaic cell and method for fabrication of said cell. / (Fr) Cellule photovoltaique et procede de fabrication d'une telle cellule. Universite de Neuchatel April 1995: WO 1995/010856

5 **Keppner Herbert,** Buser Rudolf, Zumkehr Frank, Burger Juergen: Thermal flow sensor having recesses in a substrate. Codman & Shurtleff January 2006: EP1612523

6 **Keppner Herbert**: Highly-integrated miniature thermoelectric converter. / (Fr) Convertisseur thermoelectrique miniature a haute integration. Px Tech July 2003: WO 2003/063257

7 **Keppner Herbert**, Buser Rudolf, Zumkehr Frank, Burger Juergen: Thermal flow sensor with depression on substrate. Codman & Shurtleff January 2006: JP 2006-017723

8 HOGG Andreas, **KEPPNER Herbert**: Plasma enhanced polymer ultra-thin multi-layer packaging,.Feb, 17 2011: WO 2011/018707

9 HOGG Andreas, **KEPPNER Herbert**: Packaging with active protection layer.,Feb, 17 2011: WO 2011/018705

10 HOGG Andreas, **KEPPNER Herbert**: Ultra-thin multi-layer packaging., Feb, 17 2011: WO 2011/018709