

## CV Karl Leo



### 1. General Information

Title, first name, surname	Prof. Dr. rer. nat. Dr. techn. h.c. Karl Leo
Date/place of birth	10.07.1960 / Freiburg i. Brsg.
Actual position or status	Professor W3
Address	Technische Universität Dresden Dresden Integrated Center for Applied Physics and Photonic Materials (IAPP) and Institut für Angewandte Physik D- 01062 Dresden
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### 2. Academic Education with Degree

Field of study	period/year	University	Degree	Thesis supervisor
Physik	1980-1985	Universität Freiburg	Dipl.-Phys.	Adolf Goetzberger

### 3. Scientific Degrees (Dr./PhD, habil, others)

Degree	Field	University	Date	Thesis supervisor
Dr. rer. nat.	Physik	Universität Stuttgart	1988	Hans Queisser
Privatdozent	Physik	RWTH Aachen	1993	Heinrich Kurz

### 4. Professional Career after Graduation

Period	Position	Affiliation
10/2013-9/2014	Visiting Professor	King Abdullah University of Science and Technology, Thuwal, Saudi-Arabia
2001-2013	2001-2008 Department Head, 2008-2013 Director	Fraunhofer Institute for Photonic Microsystems/since 2012 Fraunhofer COMEDD
Since 1993	Full Professor of Optoelectronics	Technische Universität Dresden
1991-1993	Assistant Professor	RWTH Aachen
1989-1991	Postdoc	AT&T Bell Laboratories, Holmdel, NJ, USA
1986-1988	Research Associate	Max-Planck-Institut für Festkörperforschung, Stuttgart

## 5. Other Functions

Period/year	Description
2015-	Board Member of the Excellence Network "Center for Advancing Electronics Dresden (cfaed)"
2009-2011	Director, Network "Organic Electronics Saxony" www.oes-net.de
2009-2012	Chair and Organizer, Plastic Electronics Conference, Dresden
2009	Visiting Professor, Institute for Materials Research, Tohoku University, Sendai, Japan
2008-2014	Member of the Board of Heliatek GmbH, Dresden
Since 2008	Member of the Board of sim4tec GmbH, Dresden
2008-2015	Coordinator of DFG priority programme "Organic Photovoltaics" SPP1355
2008	Chair and Organizer, International Conference on Organic Electroluminescence, Dresden
2003-2009	Member and (2003-2006) Chair of Supervisory Board of Novalad AG, Dresden
Since 1999	Co-founder of 8 spin-off companies, >250 employees, >70M€ raised

## 6. Honors and Awards

Year	Description
2016	Technology Transfer Prize of the Deutsche Physikalische Gesellschaft (DPG)
2015	Fellow of the Optical Society of America (OSA)
2015/2016	ISI "Highly Cited" Scientist in Materials Sciences
2015	Fellow of the Canadian Institute for Advanced Research (CIFAR)
2014	Election into the European Academy of Sciences (EURASC)
2014	Hector-Prize and Fellow, Hector Foundation
2013	Dr. techn. h.c., University of Southern Denmark
2012	Rudolf-Jaechel-Preis of the German Society for Vacuum
2011	Future Prize of the German President
2010	ERC Advanced Grant
2006	Manfred-von-Ardenne-Preis, Europäische Fördergemeinschaft Dünne Schichten
2003	Election into the Leopoldina, National Academy of Sciences
2002	Gottfried-Wilhelm-Leibniz-Preis of the Deutsche Forschungsgemeinschaft
2002	Academy Prize of Berlin-Brandenburg Academy of Science
1992	Bennigsen-Förder award of the state Nordrhein-Westfalen
1988	Otto-Hahn-Medaille of the Max-Planck-Society

## 7. Publications

### Performance factors

- H-factor: 88 (Google Scholar), 74 (Web of Science); m-factor: 2.8 (Google)
- Citations: > 33,000 (Google Scholar), >23,000 (Web of Science)
- > 580 refereed publications

### Ten recent selected publications

1. M. Schwarze, W. Tress, B. Beyer, F. Gao, R. Scholz, C. Poelking, K. Ortstein, A.A. Guenther, D. Kasemann, D. Andrienko, K. Leo, Science **352**, 1446 (2016)
2. C. Poelking, M. Tietze, C. Elschner, S. Olthof, D. Hertel, B. Baumeier, F. Würthner, K. Meerholz, K. Leo, and D. Andrienko, Nature Materials **14**, 434 (2015).
3. Characterization of tandem organic solar cells, R. Timmreck, T. Meyer, J. Gilot, H. Seifert, T. Mueller, A. Furlan, M.M. Wienk, D. Wynands, J. Hohl-Ebinger, W. Warta, R.A.J. Janssen, M. Riede, K. Leo, Nature Photonics **9**, 478 (2015).
4. Highly efficient organic multi-junction solar cells with a thiophene based donor material, R.

- Meerheim, C. Körner, K. Leo, Applied Physics Letters **105**, 063306 (2014)
5. Doped Organic Transistors: Inversion and Depletion Regime, B. Lüssem, M.L. Tietze, H. Kleemann, C. Hoßbach, J.W. Bartha, A. Zakhidov, K. Leo, Nature Comm. **4**, 2775 (2013)
  6. R. Fitzner, E. Mena-Osteritz, A. Mishra, G. Schulz, E. Reinold, M. Weil, C. Körner, H. Ziehlke, C. Elschner, K. Leo, M. Riede, M. Pfeiffer, C. Uhrich, P. Bäuerle, J. Am.Chem.Soc. **134**, 11064 (2012)
  7. Phase-locked coherent modes in a patterned metal-organic microcavity R. Brückner, A. Zakhidov, R. Scholz, M. Sudzius, S.I. Hintschich, H. Fröb, V.G. Lyssenko, K. Leo, Nature Photonics **6**, 322–326 (2012)
  8. Highly conductive PEDOT: PSS electrode with optimized solvent and thermal post-treatment for ITO-free organic solar cells; Y.H. Kim, C. Sachse, M.L. Machala, C. May, L. Müller-Meskamp, K. Leo, Advanced Functional Materials **21**, 1076 (2011)
  9. White organic light-emitting diodes with fluorescent tube efficiency, Reineke, S.; Lindner, F.; Schwartz, G. et al., Nature **459**, 234 (2009)
  10. Highly efficient organic devices based on electrically doped transport layers, K. Walzer, B. Maennig, M. Pfeiffer, K. Leo, Chemical Reviews **107**, 1233 (2007)

### **Patents**

(co-) inventor of approx. 50 patent families, large majority of them licensed or sold to companies