

CV

Prof. Dr. Paul W.M. Blom

14.01.1965, male

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Present position: Director



Academic education and certificates

1983 – 1988 Study of Applied Physics at the Technical University of Eindhoven, The Netherlands.

Scientific certificates/degrees

Dissertation: Semiconductor Physics, Technical University of Eindhoven, The Netherlands, 1992, supervised by Prof. Dr. Wolter.

Professional career

1992 – 2000 Research Scientist at Philips Research Laboratories, Eindhoven, The Netherlands
2000 – 2008 Full Professor (Physics) at the University of Groningen, Physics of Organic Semiconductors
2008 – 2012 Scientific Director of Holst Centre, Eindhoven, The Netherlands
since 2012 Director at Max Planck Institute for Polymer Research, Mainz, Germany
since 2015 Honorary Professor (Physics) at Johannes Gutenberg University, Mainz, Germany

Organisational skills and competences, awards

Awards and Scholarships (selection): Co-recipient of the EU Descartes prize 2003 for the development of Polymer Light-Emitting Diodes for Displays, Scientific American Top 50 Award of most important accomplishments in research, business or policymaking of 2005 for the invention of the organic ferroelectric memory, Principal Scientist Dutch Organization of Applied Research (TNO) (2009-2013), 2011 Thomson Reuters ranking Highly Cited Researcher, ranking among top 1% of researchers in Materials Science, Ranked in 2014 Thomson Reuters list of The World's Most Influential Scientific Minds, Recipient of the Gilles Holst Medal of the Royal Dutch Academy of Science 2015 (career award for applied science), 2018 Clavirate's ranking of Highly Cited researchers, ranking among top 1% of researchers in Materials Science.

Services to the Community – Positions of Trust

Since 2003 Editorial Board Member of Advanced Materials
Since 2016 Editorial Board Member Advanced Electronic Materials and Materials Horizons,
Since 2014 Member of Scientific Advisory Board of the National Research Foundation Singapore
Since 2017 Chair of the Scientific Advisory Board of the CREATE program, Singapore
Since 2015 Chair of the International Advisory Board of UK EPSRC Program “Control of Spin in Organic Semiconductors”
Since 2018 Editorial Board Member of Semiconductor Science and Information Devices
Since 2019 Member of the ESF College of Expert Reviewers

Recent Publications

Total: 431, h-index (WoS) 98

- [1]. D. Abbaszadeh, A. Kunz, G.-J. A. H. Wetzelaer, J. J. Michels, N. I. Craciun, K. Koynov, I. Lieberwirth, and P. W. M. Blom, "Elimination of charge carrier trapping in diluted semiconductors", *Nature Materials* 15 (6), 628-633 (2016).
- [2] N.B. Kotadiya, H. Lu, A. Mondal, Y. Je, D. Andrienko, P.W.M. Blom and G.A.H. Wetzelaer, "Universal strategy for Ohmic hole injection into organic semiconductors with high ionization energies", *Nature Materials* 17, p. 329 (2018)
- [3] Q. Niu, R. Rohloff, G.A.H. Wetzelaer, P.W.M. Blom, N.I. Crăciun, "Hole trap formation in polymer light-emitting diodes under current stress", *Nature Materials* 17, p. 557 (2018).
- [4] N. B. Kotadiya, A. Mondal, P. W. M. Blom, D. Andrienko, and G. A. H. Wetzelaer, "A window to trap-free charge transport in organic semiconducting thin films", *Nature Materials* 18, p. 1182 (2019)
- [5] N. B. Kotadiya, P. W. M. Blom, and G. A. H. Wetzelaer, "Efficient and stable single-layer organic light-emitting diodes based on thermally activated delayed fluorescence", *Nature Photonics* 13, 765 (2019)

Expertise and facilities

Combined experimental and numerical studies of devices based on organic semiconducting devices. The laboratory is fully equipped for the fabrication and characterization of organic semiconductors, including synthesis lab, clean room, electrical set-ups, time-resolved optical measurements and morphology characterization via AFM, Solis state NMR and GIWAX.