

Title:

The Story of PCBM and about Symmetry in OPV

Author:

J.C. (Kees) Hummelen

Affiliation:

Stratingh Institute for Chemistry & Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 4, 9747 AG Groningen, The Netherlands. e-mail: j.c.hummelen@rug.nl

Abstract:

We will unveil the true story of PCBM. Or, in other words, we will finally give the design rules for an optimal C<sub>60</sub>-based n-type semiconductor material for solution-processable OPV (and potentially numerous other applications). From there, we will discuss some recent developments in bulk-heterojunction OPV with a view from the acceptor side. Finally, we will propose a paradigm shift in the description of the working principles of OPV, based on symmetry arguments.