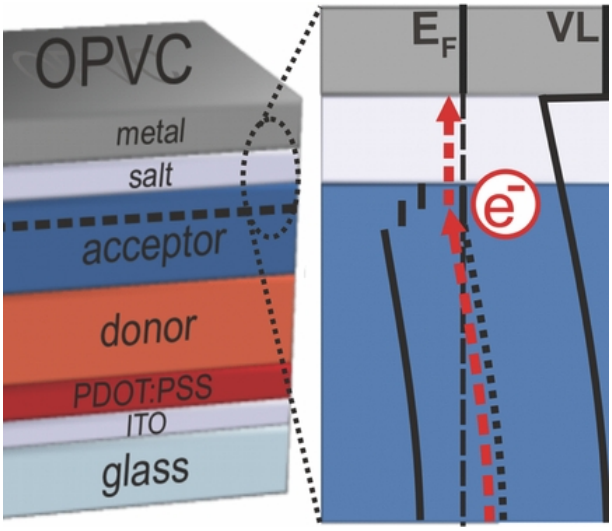
Band-bending in organic semiconductors

Band-bending in organic semiconductors, occurring at metal/alkali-halide cathodes in organic-electronic devices, is experimentally revealed and electrostatically modeled. Metal-to-organic charge transfer through the insulator, rather than doping of the organic by alkali-metal ions, is identified as the origin of the observed band-bending, which is in contrast to the localized interface dipole occurring without the insulating buffer layer.



Band-Bending in Organic Semiconductors: the Role of Alkali-Halide Interlayers

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