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Verfahren zur Herstellung von Partikeln mit einer Polymerkonjugathülle

Abstract

The invention is directed to a method for preparing hybrid particles comprising the steps of:

- providing particles having a plurality of $-Ar^1-X$ groups on their surface,
- preparing initiated sites $-Ar^1-NiL-X$ on the surface of the particles from step a) using a Ni(II) or Ni(0) compound,
- Contacting the particles from step b) with propagation monomers of the general formula $Z-Ar^2-X$ to form polymer chains attached to the particles, wherein Ar^1 and Ar^2 are independently selected from substituted or unsubstituted aryl or heteroaryl groups, L represents two monodentate ligands which are selected from the group consisting of triarylphosphine (PAr_3), trialkylphosphine (PR_3) and combinations thereof; or L represents a bidentate ligand.

The invention is further directed to hybrid particles obtainable by this method and the use of the hybrid particles in optoelectronic, sensor and solar cell applications, and to the solar cell itself.

Vorteile

- Improved properties compared to hybrid particles prepared by known methods
- Significant increase of reaction rate and selectivity

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