

## Publications in Book Chapters

[1] *Charge separation at nanostructured molecular donor-acceptor interfaces.*

A. Opitz, **R. Banerjee**, S. Grob, M. Gruber, A. Hinderhofer, U. Hoermann, J. Kraus, T. Linderl, C. Lorch, A. Steindamm, A.-K. Topczak, A. Wilke, N. Koch, J. Pflaum, F. Schreiber, and W. Brueetting, in *Elementary Processes in Organic Photovoltaics*, Volume **272**, series 'Advances in Polymer Science', Springer International Publishing 77-108 (2017).

[https://link.springer.com/chapter/10.1007/978-3-319-28338-8\\_4](https://link.springer.com/chapter/10.1007/978-3-319-28338-8_4)

## Publications in Peer-Reviewed Journals

[25] *Systematic investigation of close-packed silica nanospheres monolayer under sintering conditions.*

S. Khanna, Utsav, H. Chaliyawala, S. Paneliya, D. Roy, K. Mukhopadhyay, **R. Banerjee**, I. Mukhopadhyay, *J. Eur. Ceram. Soc.* **39**, 1411-1419 (2019). Impact factor 3.411

<https://doi.org/10.1016/j.jeurceramsoc.2018.11.047>

[24] *Fabrication of long-ranged close-packed monolayer of silica nanospheres by spin coating.*

S. Khanna, Utsav, P. Marathe, H. Chaliyawala, N. Rajaram, D. Roy, **R. Banerjee**, I. Mukhopadhyay, *Colloids and Surfaces A* **553**, 520–527 (2018). Impact factor 2.714

<https://doi.org/10.1016/j.colsurfa.2018.05.063>

[23] *Monitoring Self-Assembly and Ligand Exchange of PbS Nanocrystal Superlattices at the Liquid/Air Interface in Real Time.*

S. Maiti, A. André, **R. Banerjee**, J. Hagenlocher, O. Konovalov, F. Schreiber, M. Scheele, *J. Phys. Chem. Lett.* **9**, 739-744 (2018) Impact factor 9.353

<https://pubs.acs.org/doi/abs/10.1021/acs.jpcllett.7b03278>

[22] *Interrupted growth to manipulate phase-separation in DIP:C60 organic semiconductor blends.*

**R. Banerjee**, A. Hinderhofer, M. Weinmann, B. Reisz, C. Lorch, A. Gerlach, M. Oettel, and F. Schreiber, *J. Phys. Chem. C* **122**, 1839-1845 (2018) Impact factor 4.835

<https://pubs.acs.org/doi/abs/10.1021/acs.jpcc.7b09637>

[21] *Structural, optical, and electronic characterization of perfluorinated sexithiophene films and mixed films with sexithiophene.*

B. Reisz, S. Weimer, **R. Banerjee**, C. Zeiser, C. Lorch, G. Duva, J. Dieterle, K. Yonezawa, J.-P. Yang, N. Ueno, S. Kera, A. Hinderhofer, A. Gerlach, F. Schreiber, *J. Mater. Res.* **32**, Issue 10, 1908-1920 (2017) Impact factor 1.579 <https://doi.org/10.1557/jmr.2017.99>

[20] *Influence of C60 co-deposition on the growth kinetics of diindenoperylene - From rapid roughening to layer-by-layer growth in blended organic films.*

C. Lorch, J. Novak, **R. Banerjee**, S. Weimer, J. Dieterle, C. Frank, A. Hinderhofer, A. Gerlach, F. Carlà, and F. Schreiber, *J Chem. Phys.* **146**, 052807 (2017) Impact factor 2.894

<http://scitation.aip.org/content/aip/journal/jcp/146/5/10.1063/1.4966583>

[19] *Site-Specific Ligand Interactions Favor the Tetragonal Distortion of PbS Nanocrystal Superlattices.*

J. Novak\*, **R. Banerjee\***, A. Kornowski, M. Jankowski, A. André, H. Weller, F. Schreiber, and M. Scheele, *ACS Appl. Mater. Interfaces* **8**, 22526 (2016) Impact factor (7.145)

\* Authors contributing equally

<http://pubs.acs.org/doi/abs/10.1021/acsami.6b06989>

[18] *Structural properties of picene-perfluoropentacene and picene-pentacene blends: Superlattice formation versus limited intermixing.*

J. Dieterle, K. Broch, A. Hinderhofer, H. Frank, J. Novak, A. Gerlach, T. Breuer, **R. Banerjee**, G. Witte, and F. Schreiber, *J. Phys. Chem. C* **119**, 26339 (2015). Impact factor (4.835)

<http://pubs.acs.org/doi/10.1021/acs.jpcc.5b08866>

[17] *Controlling length-scales of the phase separation to optimize organic semiconductor blends.*

C. Lorch, H. Frank, **R. Banerjee**, A. Hinderhofer, A. Gerlach, G. Li Destri, and F. Schreiber, *Appl. Phys. Lett.* **107**, 201903 (2015). Impact factor (3.302)

<http://scitation.aip.org/content/aip/journal/apl/107/20/10.1063/1.4935545>

[16] *Templating effects of  $\alpha$ -sexithiophene in donor-acceptor organic thin films.*

C. Lorch, **R. Banerjee**, J. Dieterle, A. Hinderhofer, A. Gerlach, J. Drnec, and F. Schreiber, *J. Phys. Chem. C* **119**, 23211 (2015). Impact factor (4.835)

<http://pubs.acs.org/doi/10.1021/acs.jpcc.5b06064>

[15] *Direct observation of conductive filament formation in Alq3 based organic resistive memories.*

Y. Busby, S. Nau, S. Sax, E. J. W. List-Kratochvil, J. Novak, **R. Banerjee**, F. Schreiber, and J.-J. Pireaux, *J. Appl. Phys.* **118**, 075501 (2015). Impact factor (2.185)

<http://scitation.aip.org/content/aip/journal/jap/118/7/10.1063/1.4928622>

[14] *Reversible monolayer-to-crystalline phase transition in amphiphilic silsesquioxane at the air-water interface.*

**R. Banerjee**, M. K. Sanyal, M. K. Bera, A. Gibaud, B. Lin, and M. Meron, *Sci. Rep.* (Nature Publishing Group) **5**, 8497 (2015). Impact factor (5.078)

[http://www.nature.com/srep/2015/150217/srep08497/full/srep08497.html?WT.ec\\_id=SREP-639-20150224](http://www.nature.com/srep/2015/150217/srep08497/full/srep08497.html?WT.ec_id=SREP-639-20150224)

[13] *Structure and morphology of organic semiconductor-nanoparticle hybrids prepared by soft deposition.*

**R. Banerjee**, J. Novak, C. Frank, M. Girleanu, O. Ersen, M. Brinkmann, F. Anger, C. Lorch, J. Dieterle, A. Gerlach, J. Drnec, S. Yu, and F. Schreiber, *J. Phys. Chem. C* **119**, 5225 (2015). Impact factor (4.835)

<http://pubs.acs.org/doi/abs/10.1021/acs.jpcc.5b00480>

[12] *Air-Stable, non-volatile resistive memory based on hybrid organic/inorganic nanocomposites.*

G. Casula, P. Cosseddu, Y. Busby, J.-J. Pireaux, M. Rosowski, B. T. Szczesna, K. Soliwoda, G. Celichowski, J. Grobelny, J. Novak, **R. Banerjee**, F. Schreiber, and A. Bonfiglio, *Org. Electron.* **18**,

17 (2015). Impact factor (3.676)  
<http://www.sciencedirect.com/science/article/pii/S1566119915000026>

[11] *Growth of competing crystal phases of  $\alpha$ -sexithiophene studied by real-time in-situ X-ray scattering.*

C. Lorch, **R. Banerjee**, C. Frank, J. Dieterle, A. Hinderhofer, A. Gerlach, and F. Schreiber, *J. Phys. Chem. C* **119**, 819 (2015). Impact factor (4.835) <http://pubs.acs.org/doi/abs/10.1021/jp510321k>

[10] *Analysis of island shape evolution from diffuse x-ray scattering of organic thin films and implications for growth.*

C. Frank, **R. Banerjee**, M. Oettel, A. Gerlach, J. Novak, G. Santoro, and F. Schreiber, *Phys. Rev. B* **90**, 205401 (2014). Impact factor (3.664)  
<http://journals.aps.org/prb/abstract/10.1103/PhysRevB.90.205401>

[9] *Island size evolution and molecular diffusion during growth of organic thin films followed by time-resolved specular and off-specular scattering.*

C. Frank, J. Novak, **R. Banerjee**, A. Gerlach, F. Schreiber, A. Vorobiev, and S. Kowarik, *Phys. Rev. B* **90**, 045410 (2014). Impact factor (3.664)  
<http://journals.aps.org/prb/abstract/10.1103/PhysRevB.90.045410>

[8] *Fabrication and characterization of combined metallic nanogratings and ITO electrodes for organic photovoltaic cells.*

D. A. Gollmer, F. Walter, C. Lorch, J. Novak, **R. Banerjee**, J. Dieterle, G. Santoro, F. Schreiber, D P. Kern, M. Fleischer, *Microelectron. Eng.* **119**, 122 (2014). Impact factor (1.338)  
<http://www.sciencedirect.com/science/article/pii/S0167931714001373>

[7] *Real-time X-ray scattering studies on temperature dependence of Perfluoropentacene thin film growth.*

C. Frank, J. Novak, A. Gerlach, G. Ligorio, K. Broch, A. Hinderhofer, A. Aufderheide, **R. Banerjee**, R. Nervo, and F. Schreiber, *J. Appl. Phys.* **114**, 043515 (2013). Impact factor (2.185)  
<http://scitation.aip.org/content/aip/journal/jap/114/4/10.1063/1.4816320>

[6] *Evidence for kinetically limited thickness dependent phase separation in organic thin film blends.*

**R. Banerjee**, J. Novak C. Frank, C. Lorch, A. Hinderhofer, A. Gerlach and F. Schreiber, *Phys. Rev. Lett.* **110**, 185506 (2013). Impact factor (7.728)  
<http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.110.185506>

[5] *Mixing-induced anisotropic correlations in molecular crystalline systems.*

A. Aufderheide, K. Broch, J. Novak, A. Hinderhofer, R. Nervo, A. Gerlach, **R. Banerjee** and F. Schreiber, *Phys. Rev. Lett.* **109**, 156102 (2012). Impact factor (7.728)  
<http://journals.aps.org/prl/abstract/10.1103/PhysRevLett.109.156102>

[4] *Structural re-ordering in monolayers of gold nanoparticles during transfer from water surface to solid substrate.*

**R. Banerjee**, M. K. Sanyal, M. K. Bera, A. Singh, J. Novak and O. Konovalov, *Phys. Rev. E* **83**, 051605 (2011). Impact factor (2.326)  
<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.83.051605>

- [3] *Nanopattern formation in self-assembled monolayers of thiol-capped Au nanocrystals.*  
**R. Banerjee**, S. Hazra, S. Banerjee and M. K. Sanyal, *Phys. Rev. E* **80**, 056204 (2009). Impact factor (2.326)  
<http://journals.aps.org/pre/abstract/10.1103/PhysRevE.80.056204>
- [2] *Effect of vibrations on the formation of gold nanoparticle aggregates at the toluene-water interface.*  
M. K. Bera, M. K. Sanyal, **R. Banerjee**, K. P. Kalyanikutty and C. N. R. Rao, *Chem. Phys. Lett.* **461**, 97 (2008). Impact factor (1.991)  
<http://www.sciencedirect.com/science/article/pii/S0009261408009081>
- [1] *Enhanced surface diffusion in forming ion-beam-induced nanopatterns on Si(001).*  
**R. Banerjee**, S. Hazra and M. K. Sanyal, *J. Phys. D* **41**, 055306 (2008). Impact factor (2.521)  
<http://iopscience.iop.org/0022-3727/41/5/055306>