

Further recent high impact publications by CeNTech scientists:

2019

S. Amirjalayer, H. Fuchs, D. Marx

Understanding the Mechanocatalytic: Conversion of Biomass: A Low-Energy One-Step Reaction Mechanism by Applying Mechanical Force

Angew. Chemie Int. Ed. (2019), DOI: 10.1002/anie.201811091

2018

J. Atwater, D. S. Mattes, B. Streit, C. von Bojničić-Kninski, F. F. Loeffler, F. Breitling, H. Fuchs, M. Hirtz

Combinatorial Synthesis of Macromolecular Arrays by Microchannel Cantilever Spotting (μ CS)

Advanced Materials 30, 1801632 (2018)

Cheng Z, Ríos C, Youngblood N, Wright C. David, Pernice W.H.P, Bhaskaran H.
Device-Level Photonic Memories and Logic Applications Using Phase-Change Materials

Advanced Materials 30, 1802425 (2018)

L. Liu, H. Klaasen, A. Timmer, H.-Y. Gao, D. Barton, H. Mönig, J. Neugebauer, H. Fuchs, A. Studer

α -Diazo Ketones in On-Surface Chemistry

J. Am. Chem. Soc. 140, 6000–6005 (2018)

H. Lu, Y. Cao, J. Qi, A. Bakker, C.A. Strassert, X. Lin, K.-H. Ernst, S. Du, H. Fuchs, H.-J. Gao

Modification of the Potential Landscape of Molecular Rotors on Au(111) by the Presence of an STM Tip

Nano Letters 18, 4704-4709 (2018)

A. Timmer, H. Moenig, M. Uphoff, O. Díaz Arado, S. Amirjalayer, H. Fuchs

Site-specific adsorption of aromatic molecules on a metal/ metal oxide phase boundary

Nano Letters 18, 4123-4129 (2018)

I. Niehues, R. Schmidt, M. Drüppel, P. Marauhn, D. Christiansen, M. Selig, G. Berghäuser, D. Wigger, R. Schneider, L. Braasch, R. Koch, A. Castellanos-Gomez, T. Kuhn, A. Knorr, E. Malic, M. Rohlfing, S. Michaelis de Vasconcellos, R. Bratschkitsch

Strain control of exciton-phonon coupling in atomically thin semiconductors

Nano Letters 18, 1751-1757 (2018)

S. Amirjalayer, A. Martinez-Cuezva, J. Berna, S. Woutersen, W. Buma
Photoinduced Pedalo-Type Motion in an Azodicarboxamide-Based Molecular Switch
Angew. Chem. Int. Ed. 57, 1792-1796 (2018)
Angew. Chem. 130, 1810-1814 (2018)

S. Wilde, D. Ma, T. Koch, A. Bakker, D. Gonzalez-Abradelo, L. Stegemann, C.G. Daniliuc, H. Fuchs, H.Y. Gao, N.L. Doltsinis, L. Duan, C.A. Strassert
Toward Tunable Electroluminescent Devices by Correlating Function and Submolecular Structure in 3D Crystals, 2D-Confined Monolayers, and Dimers
ACS Applied Material Interfaces 10, 22460-22473 (2018)

J.H. Kim, K. Riehemann, H. Fuchs
Force Spectroscopy on a Cell Drum: AFM Measurements on the Basolateral Side of Cells via Inverted Cell Cultures
ACS Applied Material Interfaces 10, 12485–12490 (2018)

Ritter R, Gruhler N, Dobbertin H, Kübler H, Scheel S, Pernice W, Pfau T, Löw R
Coupling Thermal Atomic Vapor to Slot Waveguides
Physical Review X 2018, No. 8: 021032

Arora, T. Deilmann, P. Marauhn, M. Drüppel, R. Schneider, M. R. Molas, D. Vaclavkova, S. Michaelis de Vasconcellos, M. Rohlfing, M. Potemski, R. Bratschitsch
Valley-contrasting optics of interlayer excitons in Mo- and W-based bulk transition metal dichalcogenides
Nanoscale 2018, accepted

E. Hossain, A. A. Rahman, R. Bapat, J. B. Parmar, A. P. Shah, A. Arora, R. Bratschitsch, A. Bhattacharya
Facile synthesis of WS₂ nanotubes by sulfurization of tungsten thin films: formation mechanism, structural and optical properties
Nanoscale 2018, accepted

2017

Tonndorf, O. Del Pozo Zamudio, N. Gruhler, J. Kern, R. Schmidt, A. I. Dmitriev, A. P. Bakhtinov, A. I. Tartakovskii, W. HP Pernice, S. Michaelis de Vasconcellos, R. Bratschitsch
On-chip waveguide coupling of a layered semiconductor single-photon source.
Nano Letters 17, 5446-5451 (2017)

A. Arora, J. Noky, M. Drüppel, B. Jariwala, T. Deilmann, R. Schneider, R. Schmidt, O. Del Pozo Zamudio, T. Stiehm, A. Bhattacharya, P. Krüger, S. Michaelis de Vasconcellos, M. Rohlfing and R. Bratschitsch
Highly anisotropic in-plane excitons in atomically thin and bulk-like 1T'-ReSe₂
Nano Letters 17, 3202 (2017)

D. Christiansen, M. Selig, G. Berghäuser, R. Schmidt, I. Niehues, R. Schneider, A. Arora, S. Michaelis de Vasconcellos, R. Bratschitsch, E. Malic, A. Knorr
Phonon sidebands in monolayer transition metal dichalcogenides
Phys. Rev. Lett. 119, 187402 (2017)

Sinha, N.; Stegemann, L.; Tan, T. T. Y.; Doltsinis, N. L.; Strassert, C. A.; Hahn, F. E.
Einschaltbare Fluoreszenz in Tetra-NHC-Liganden durch Versteifung bei der Komplexbildung: eine Alternative zu aggregationsinduzierter Emission.
Angewandte Chemie International Edition 2017, 56, 2785
Angewandte Chemie, 129, 2829

Gugula, K.; Entrup, M.; Stegemann, L.; Seidel, S.; Pöttgen, R.; Strassert, C. A.; Brendol, M.
Solid Solution Quantum Dots with Tunable Dual or Ultrabroadband Emission for LEDs.
ACS Applied Materials Interfaces 9, 521 (2017)

A. Motealleh, N. S. Kehr
Janus Nanocomposite hydrogels for chirality-dependent cell adhesion and migration
ACS Applied Materials Interfaces 9, 33674-33682 (2017)

U. Bog, A. d. I. Santos Pereira, S. L. Mueller, S. Havenridge, V. Parrillo, M. Bruns, A. E. Holmes, C. Rodriguez-Emmenegger, H. Fuchs, M. Hirtz
Clickable Antifouling Polymer Brushes for Polymer Pen Lithography
ACS Applied Material Interfaces 9, 12109-12117 (2017)

H.-Y. Gao, P. A. Held, S. Amirjalayer, L. Liu, A. Timmer, B. Schirmer, O. Díaz Arado, H. Mönig, C. Mück-Lichtenfeld, J. Neugebauer, A. Studer, H. Fuchs
Intermolecular On-Surface σ -Bond Metathesis
J. Am. Chem. Soc. 139 (20), 7012-7019 (2017)

H. Kong, S. Yang, H.-Y. Gao, A. Timmer, J. P. Hill, O. Díaz Arado, H. Mönig, X. Huang, Q. Tang, Q. Ji, W. Liu, H. Fuchs
Substrate Mediated C-C and C-H Coupling after Dehalogenation
J. Am. Chem. Soc. 139, 3669-3675 (2017)

D. Ji, X. Xu, L. Jiang, S. Amirjalayer, L. Jiang, Y. Zhen, Y. Zou, Y. Yao, H. Dong, J. Yu, H. Fuchs, W. Hu
Surface polarity and self-structured nanogrooves collaborative oriented molecular packing for high crystallinity towards efficient charge transport
J. Am. Chem. Soc. 139, 2734-2740 (2017)

2016

J. Kern, I. Niehues, P. Tonndorf, R. Schmidt, D. Wigger, R. Schneider, T. Stiehm, S. Michaelis de Vasconcellos, D. E. Reiter, T. Kuhn and R. Bratschitsch
Nanoscale positioning of single-photon emitters in atomically thin WSe₂
Advanced Materials 28, 7101 (2016).

Galstyan, A.; Kauscher, U.; Block, D.; Ravoo, B. J.; Strassert, C. A.
Silicon(IV) Phthalocyanine-Decorated Cyclodextrin Vesicles as a Self-Assembled Phototherapeutic Agent against MRSA.
ACS Applied Materials Interfaces 8, 12631 (2016)

N. S. Kehr, A. Motealleh, A. Schäfer
Cell Growth on ("Janus") Density Gradients of Bifunctional Zeolite L Crystals
ACS Applied Material Interfaces 8, 35081–35090 (2016)

M. Hirtz, S. Varey, H. Fuchs, A. Vijayaraghavan
Attoliter Chemistry for Nanoscale Functionalization of Graphene
ACS Applied Material Interfaces 8, 33371-33376 (2016)

Barroso Peña, A.; Grüner, M. C.; Forbes, T.; Denz, C.; Strassert, C. A.
Spatiotemporally Resolved Tracking of Bacterial Responses to ROS-Mediated Damage at the Single-Cell Level with Quantitative Functional Microscopy
ACS Applied Materials Interfaces 8, 15046 (2016)

H. Mönig, D. R. Hermoso, O. Díaz Arado, M. Todorović, A. Timmer, S. Schürer G. Langewisch, R. Pérez, H. Fuchs
Submolecular imaging by noncontact atomic force microscopy with an oxygen atom rigidly connected to a metallic probe
ACS Nano 10, 1201-1209 (2016)

G. Plechinger, P. Nagler, A. Arora, A. Granados del Aguila, M. V. Ballotin, T. Frank, P. Steinleitner, M. Gmitra, J. Fabian, P. C. M. Christianen, R. Bratschitsch, C. Schüller, T. Korn
Excitonic valley effects in monolayer WS₂ under high magnetic fields
Nano Letters 16, 7899 (2016)

A. Arora, R. Schmidt, R. Schneider, M. Molas, I. Breslavetz, M. Potemski, R. Bratschitsch
Valley Zeeman splitting and valley polarization of neutral and charged excitons in monolayer MoTe₂ at high magnetic fields
Nano Letters 16, 3624 (2016)

R. Schmidt, G. Berghäuser, R. Schneider, M. Selig, P. Tonndorf, E. Malic, A. Knorr, S. Michaelis de Vasconcellos, R. Bratschitsch
Ultrafast Coulomb-induced intervalley coupling in atomically thin WS₂
Nano Letters 16, 2945 (2016)

J. O. Island, A. Kuc, E. H. Diependaal, R. Bratschitsch, H. S. J. van der Zant, Th. Heine, A. Castellanos-Gomez
Precise and reversible band gap tuning in single-layer MoSe₂ by uniaxial strain
Nanoscale 8, 2589 (2016)

M. Hirtz, A. Oikonomou, N. Clark, Y.-J. Kim, H. Fuchs, A. Vijayaraghavan
Self-limiting Multiplexed Assembly of Lipid Membranes on Large-area Graphene Sensor Arrays
Nanoscale 8, 15147-15151 (2016)

P. A. Held, H.-Y. Gao, L. Liu, C. Mück-Lichtenfeld, A. Timmer, H. Mönig, D. Barton, J. Neugebauer, H. Fuchs, A. Studer
On-Surface Domino Reactions: Glaser Coupling and Dehydrogenative Coupling of a Biscarboxylic Acid To Form Polymeric Bisacylperoxides
Angewandte Chemie Int. Ed. 55, 9777–9782 (2016)

P. A. Held, H.-Y. Gao, L. Liu, C. Mück-Lichtenfeld, A. Timmer, H. Mönig, D. Barton, J. Neugebauer, H. Fuchs, A. Studer
Oberflächen-Dominoreaktion: Glaser-Kupplung und dehydrierende Kupplung von Dicarbonsäuren unter Bildung eines polymeren Bisacylperoxids
Angewandte Chemie 128, 9929–9934 (2016)

P. S. Popp, J. F. Herrmann, E.-C. Fritz, B. J. Ravoo, C. Höppener
Impact of the Nanoscale Gap Morphology on the Plasmon Coupling in Asymmetric Nanoparticle Dimer Antennas
small 12, 1667–1675 (2016)

2015

C. Riethmuller, M. A. McAleer, S. A. Koppes, R. Abdayem, J. Franz, M. Haftek, L. E. Campbell, S. F. MacCallum, W. H. McLean, A. D. Irvine, S. Kezic.
Filaggrin breakdown products determine corneocyte conformation in patients with atopic dermatitis.
J Allergy Clin Immunol. 2015 Jun 11. pii: S0091-6749(15)00649-1. doi: 10.1016/j.jaci.2015.04.042. [Epub ahead of print] PubMed PMID: 26071937.

Harry Mönig, Diego R. Hermoso, Oscar Díaz Arado, Milica Todorović, Alexander Timmer, Simon Schüler, Gernot Langewisch, Rubén Pérez, and Harald Fuchs
Submolecular Imaging by Noncontact Atomic Force Microscopy with an Oxygen Atom Rigidly Connected to a Metallic Probe
ACS Nano, DOI: 10.1021/acsnano.5b06513

F. S. Ielasi, M. Hirtz, Sekula-Neuner, T. Laue, H. Fuchs, R. G. Willaert
Dip-pen nanolithography-assisted protein crystallization
J. Am. Chem. Soc. 137, 154-157 (2015)

D. Ji, Y. Wang, L. F. Chi, H. Fuchs

Enhanced Charge Injection Through Nanostructured Electrodes for Organic Field Effect Transistors

Adv. Funct. Mater. , 5pp (2015)

Kim, J. H.; Gensch, T.; Z., Dongbing; Stegemann, L.; Strassert, C. A.; Glorius, F;

Rh(III)-Catalyzed C–H Activation with Pyridotriazoles: Direct Access to Fluorophores for Metal Ion Detection.

Angewandte Chemie International Edition 2015

Z., Dongbing; Kim, J. H.; Stegemann, L.; Strassert, C. A.; Glorius, F.;

Co(III)-Catalyzed Directed C–H Coupling with Diazo Compounds: Straightforward Access toward Novel Extended π -Systems.

Angewandte Chemie International Edition 2015, DOI: 10.1002/anie.201411994

Sanning, J.; Ewen, P.; Stegemann, L.; Schmidt, J.; Daniliuc, C. G.; Koch, T.;

Doltsinis, N. L.; Wegner, D.; Strassert, C. A.;

Scanning-Tunneling-Spectroscopy-Directed Design of Tailored Deep-Blue Emitters.

Angewandte Chemie International Edition 2015, 54, 786

2014

M. Feldmann, D. Dietzel, H. Fuchs, A. Schirmeisen

Influence of contact aging on nanoparticle friction kinetics

Physical Review Letters 112, 155503-(5pp) (2014)

Bünz, J., Brink, T., Tsuchija, K., Meng, F., Wilde, G., Albe, K.

Low temperature heat capacity of a severely deformed metallic glass

Physical Review Letters 112 (2014) 135501

Mitrofanov, Y.P., Peterlechner, M., Divinski, S.V., Wilde, G.

Impact of Plastic Deformation and ShearBand Formation on the Boson Heat Capacity Peak of Metallic Glass

Physical Review Letters 112 (2014) 135901

Zastrau, U., P. Sperling, M. Harmand, A. Becker, T. Bornath, R. Bredow, S.

Dziarzhyski, T. Fennel, L.B. Fletcher, E. Förster, S. Göde, G. Gregori, V. Hilbert, D.

Hochhaus, B. Holst, T. Laarmann, H.J. Lee, T. Ma, J.P. Mithen, R. Mitzner, C.D. Mur-

phy, M. Nakatsutsumi, P. Neumayer, A. Przystawik, S. Roling, M. Schulz, B. Siemer,

S. Skruszewicz, J. Tiggesbäumker, S. Toleikis, T. Tschentscher, T. White, M.

Wöstmann, H. Zacharias, T. Döppner, S.H. Glenzer, R. Redmer;

Resolving ultrafast heating of dense cryogenic hydrogen

Physical Revue Letters 112, 105002 (2014)

L. Jiang, X. Chen, N. Lu, L. F. Chi

Spatially confined assembly of nanoparticles

Acc. Chem. Res. 47, 3009–3017 (2014)

H.-Y. Gao, P. A. Held, M. Knor, C. Mück-Lichtenfeld, J. Neugebauer, A. Studer, H. Fuchs

Decarboxylative polymerization of 2,6-naphthalenedicarboxylic acid at surfaces

J. Am. Chem. Soc. 136, 9658–9663 (2014)

J. Y. Huang, Y. K. Lai, F. Pan, L. Yang, H. Wang, K. Q. Zhang, H. Fuchs, L. F. Chi

Multifunctional superamphiphobic TiO₂ nanostructure surfaces with facile wettability and adhesion engineering

Small 10, 4865–4873 (2014)

U. Bog, F. Brinkmann,, H. Kalt, C. Koos, T. Mappes, M. Hirtz, H. Fuchs, S. Köber

Large-scale parallel surface functionalization of goblet-type whispering gallery mode microcavity arrays for biosensing applications

Small 10, 3863–3868 (2014)

H. Wang, W. Wang, L. Li, M. Hirtz, C. G. Wang, Y. Wang, Z. Xie, H. Fuchs, L. F. Chi

Tunable organic hetero-patterns via molecule diffusion control

Small 10, 3045–3049 (2014)

H. Wang, W. Wang, L. Li, J. Zhu, W. Wang, D. Zhang, Z. Xie, H. Fuchs, Y. Lei, L. F. Chi

Surface microfluidic patterning and transporting organic small molecules

Small 10, 2549–2552 (2014)

X. Zhang, J. Zhu, X. Huang, Q. Qian, Y. He, L. F. Chi, Y. Wang

Controllable and facile fabrication of gold nanostructures for selective metal-assisted etching of silicon

Small 10, 2451–2458 (2014)

E. Oppong, P. N. Hedde, S. Sekula-Neuner, L. Yang, F. Brinkmann, R. M. Dörlich, M. Hirtz, H. Fuchs, G. U. Nienhaus, A. C. B. Cato

Localization and dynamics of glucocorticoid receptor at the plasma membrane of activated mast cells

Small 10, 1991–1998 (2014)

H. Zhang, J.-H. Franke, D. Zhong, Y. Li, A. Timmer, O. Díaz Arado, H. Mönig, H. Wang, L. F. Chi, Z. Wang, K. Müllen, H. Fuchs

Surface supported gold–organic hybrids: On-surface synthesis and surface directed orientation

Small 10, 1361–1368 (2014)

D. Zhong, T. Blömker, C. Mück-Lichtenfeld, H. Zhang, G. Kehr, G. Erker, H. Fuchs, L. F. Chi

Thymine and adenine tetrads formed on anisotropic metal surfaces

Small 10, 265–270 (2014)

E. Oppong, P. N. Hedde, S. Sekula-Neuner, L. Yang, F. Brinkmann, R. M. Dörlich, M. Hirtz, H. Fuchs, G. U. Nienhaus, A. C. B. Cato

Localization and dynamics of glucocorticoid receptor at the plasma membrane of activated mast cells

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H. Wang, W. Wang, L. Li, M. Hirtz, C. G. Wang, Y. Wang, Z. Xie, H. Fuchs, L. F. Chi

Tunable organic hetero-patterns via molecule diffusion control

Small, 5pp (2014)

H. Zhang, J.-H. Franke, D. Zhong, Y. Li, A. Timmer, O. Díaz Arado, H. Mönig, H. Wang, L. F. Chi, Z. Wang, K. Müllen, H. Fuchs

Surface supported gold–organic hybrids: On-surface synthesis and surface directed orientation

Small 10, 1361–1368 (2014)

D. Zhong, T. Blömker, C. Mück-Lichtenfeld, H. Zhang, G. Kehr, G. Erker, H. Fuchs, L. F. Chi; *Thymine and adenine tetrads formed on anisotropic metal surfaces*

Small 10, 265–270 (2014)

2013

Y. Hua, A. Woehler, M. Kahms, V. Haucke, E. Neher E, J. Klingauf

Blocking endocytosis enhances short-term synaptic depression under conditions of normal availability of vesicles

Neuron 80, 343-349 (2013)

L. Li, P. Gao, M. Baumgarten, K. Müllen, N. Lu, H. Fuchs, L. F. Chi

High performance field-effect ammonia sensors based on a structured ultrathin organic semiconductor film

Adv. Mater. 25, 3419–3425 (2013)

W. Wang, C. Du, L. Li, H. Wang, C. Wang, Y. Wang, H. Fuchs, L. F. Chi

Addressable organic structure by anisotropic wetting

Adv. Mater. 25, 2018-2023 (2013)

Y. Lai, F. Pan, C. Xu, H. Fuchs, L. F. Chi

In situ surface-modification-induced superhydrophobic patterns with reversible wettability and adhesion

Adv. Mater. 25, 1682-1686 (2013)

Cristina Cebrián, Matteo Mauro, Dimitrios Kourkoulos, Pierluigi Mercandelli, Dirk Hertel, Klaus Meerholz, Cristian A. Strassert and Luisa De Cola

Luminescent Neutral Platinum Complexes Bearing an Asymmetric N[^]N[^]N Ligand for High-Performance Solution-Processed OLEDs

Advanced Materials, Special Issue: Gated Systems for Multifunctional Optoelectronic Devices, Volume 25, Issue 3, pages 437–442, January 18, 2013

L. Li, P. Gao, W. Wang, K. Müllen, H. Fuchs, L. F. Chi

Growth of ultrathin organic semiconductor microstripes with thickness control in the monolayer precision

Angew. Chem. Int. Ed. 52, 12530–12535 (2013)

Angew. Chem. 125, 12762–12767 (2013)

H.-Y. Gao, H. Wagner, D. Zhong, J.-H. Franke, A. Studer, H. Fuchs

Glaser coupling at metal surfaces

Angew. Chem. Int. Ed. 52, 4024–4028 (2013)

Angew. Chem. 125, 4116–4120 (2013)

D. Wegner, R. Yamachika, X. Zhang, Y. Wang, M. F. Crommie, and N. Lorente

Adsorption site determination of a molecular monolayer via inelastic tunneling

Nano Letters 13, 2346 (2013)

H. Mönig, M. Todorovic, M. Z. Baykara, T. C. Schwendemann, L. Rodrigo, E. I. Altman, R. Perez, U. D. Schwarz

Understanding scanning tunneling microscopy contrast mechanisms on metal oxides: A case study

ACS Nano 7, 10233–10244 (2013)

O. Díaz Arado, H. Mönig, H. Wagner, J.-H. Franke, G. Langewisch, P. Held, A. Studer, H. Fuchs

On-surface azide-alkyne cycloaddition on Au (111)

ACS Nano 7, 8509–8515 (2013)

D. Mishra, T.Z. Markus, R. Naaman, M. Kettner, B. Göhler, H. Zacharias, N. Friedman, M. Sheves, C. Fontanesi

Spin-dependent electron transmission through bacteriorhodopsin embedded in purple membrane

Proc. Nat. Acad. Sci. 110, 14872 (2013)

P. R. Ewen, J. Sanning, N. L. Doltsinis, M. Mauro, C. A. Strassert, and D. Wegner

Unraveling Orbital Hybridization of Triplet Emitters at the Metal-Organic Interface

Physical Review Letters 111, 267401 (2013)

D. Dietzel, M. Feldmann, U. D. Schwarz, H. Fuchs, A. Schirmeisen

Scaling laws of structural lubricity

Phys. Rev. Lett. 111, 235502–(5pp) (2013)

G. Langewisch, J. Falter, H. Fuchs, A. Schirmeisen
Forces during the controlled displacement of organic molecules
Phys. Rev. Lett. 110, 036101-(5pp) (2013)

F. Brinkmann, M. Hirtz, A. M. Greiner, M. Weschenfelder, B. Waterkotte, M. Bastmeyer, H. Fuchs
Interdigitated multicolored bioink micropatterns by multiplexed polymer pen lithography
Small 9, 3266–3275 (2013)

Y. Lai, L. Lin, F. Pan, J. Huang, R. Song, Y. Huang, C. Lin, H. Fuchs, L. F. Chi
Bioinspired patterning with extreme wettability contrast on TiO₂ nanotube array surface: A versatile platform for biomedical applications
Small 9, 2945–2953 (2013)

Z. Li, J. Hüve, C. Krampe, G. Luppi, M. Tsotsalas, J. Klingauf, L. De Cola, K. Riehemann
Internalization pathways of anisotropic disc-shaped zeolite I nanocrystals with different surface properties in hela cancer cells
Small 9, 1809–1820 (2013)

Á. Barroso, M. Woerdemann, A. Vollmer, G. von Bally, B. Kemper, and C. Denz
Three-Dimensional Exploration and Mechano- Biophysical Analysis of the Inner Structure of Living Cells
Small 9, 885-893 (2013)

H. Zhang, J.-H. Franke, D. Y. Zhong, Y. Li, A. Timmer, O. Díaz Arado, H. Mönig, H. Wang, L. F. Chi, Z. H. Wang, K. Müllen, and H. Fuchs
Surface supported gold-organic hybrids: on-surface synthesis and surface directed orientation
Small 10, 1361-1368 (2013)

2012

S. Sengupta, D. Ebeling, S. Patwardhan, X. Zhang, H. von Berlepsch, C. Böttcher, V. Stepanenko, S. Uemura, C. Hentschel, H. Fuchs, F. C. Grozema, L. D. A. Siebbeles, A. R. Holzwarth, L.F. Chi, F. Würthner
Biosupramolecular nanowires from chlorophyll dyes with exceptional charge-transport properties
Angew. Chem. 124, 6484-6488 (2012)

L. Li, K. Meise-Gresch, L. Jiang, C. Du, W. Wang, H. Fuchs, L. F. Chi;
The electrode's effect on the stability of organic transistors and circuits
Adv. Mater. 24, 3053-3058 (2012)

L. Li, L. Jiang, W. Wang, C. Du, H. Fuchs, W. P. Hu, L. F. Chi
High performance and stable organic transistors and circuits with patterned polypyrrole electrodes

Adv. Mater. 24, 2159-2164 (2012)

C. Höppener, Z. J. Lapin, P. Bharadwaj, L. Novotny;
Self-similar gold-nanoparticle antennas for a cascaded enhancement of the optical field

Phys. Rev. Lett. 109, 017402-(4pp) (2012)

S. Linden, D. Zhong, A. Timmer, N. Aghdassi, J.-H. Franke, H. Zhang, X. Feng, K. Müllen, H. Fuchs, L. F. Chi, H. Zacharias;
Electronic structure of spatially aligned graphene nanoribbons on Au(788)

Phys. Rev. Lett. 108, 216801-(5pp) (2012)

K. Riehemann;
Nanotoxicity: How the body develops a way to reduce the toxicity of carbon nanotubes

Small 8, 1970–1972 (2012)

G. Langewisch, W. Kaminski, D. Braun, R. Möller, H. Fuchs, A. Schirmeisen, R. Pérez
Understanding dissipative tip–molecule interactions with submolecular resolution on an organic adsorbate

Small 8, 602-611 (2012)

S. Sekula-Neuner, J. Maier, E. Oppong, A. Cato, M. Hirtz, H. Fuchs

Allergen arrays for antibody screening and immune cell activation profiling generated by parallel lipid dip-pen nanolithography

Small 8, 585-591 (2012)

D.K. Bhowmick, S. Linden, A. Devaux, L. De Cola, and H. Zacharias
Functionalization of Amorphous SiO₂ and 6H-SiC(0001) Surfaces with Benzo[ghi]perylene-1,2-dicarboxylic Anhydride via an APTES Linker

Small 8, 592 (2012) (back cover)

X. Yang, G. Zhang, L. Li, D. Zhang, L. F. Chi, D. Zhu
Self-assembly of a dendron-attached tetrathiafulvalene: Gel formation and modulation in the presence of chloranil and metal ions

Small 8, 578-584 (2012)

C. Schulz, S. Nowak, R. Fröhlich, and B.J. Ravoo
Covalent layer-by-layer assembly of redoxactive molecular multilayers on silicon (100) by photochemical thiol-ene chemistry.

Small 8, 569 (2012)

Y. Liu, M. He, Q. Meng, Z. Tang, L. Li, W. Hu

Mass-production of single-crystalline device arrays of an organic charge-transfer complex for its memory nature

Small 8, 557-560 (2012)

J. Liu, K. Ditte, W. Jiang, Z.H. Wang, and C. Denz;

Dipolar-Modulated Charge-Doped Trilayer Organic Semiconductor n-n Heterojunction.

Small 8, 546 (2012)

S. Oberhansl, M. Hirtz, A. Lagunas, R. Eritja, E. Martinez, H. Fuchs, J. Samitier;

Facile modification of silica substrates provides a platform for direct-writing surface click chemistry

Small 8, 541-545 (2012)

D. Zhong, L. F. Chi, H. Guo, D. Shi, H. Fuchs

Molecular cloisonné: Multicomponent organic alternating nanostructures at vicinal surfaces with tunable length scales

Small 8, 535-540 (2012)

H.P. Xu, M. Schönhoff, and X. Zhang

Unconventional Layer-by-Layer Assembly: Surface Molecular Imprinting and its Applications

Small 8, 517 (2012)

W. Yang, Yo. Li, H. Liu L. F. Chi, Yu. Li

Design and assembly of rotaxane-based molecular switches and machines

Small 8, 504-516 (2012)

L. Li, M. H. Köpf, S. V. Gurevich, R. Friedrich, L. F. Chi

Structure formation by dynamic self-assembly

Small 8, 488-503 (2012)

H. Fuchs, X. Zhang, L. F. Chi, D. Zhang

TRR 61, The "Interplay" between Münster and Beijing for Promoting Research on Multilevel Molecular Assemblies: Structure, Dynamics, and Functions

Small 8, 479-480 (2012)

2011

R. Sinha, S. Ahmed, R. Jahn, J. Klingauf

Two synaptobrevin molecules are sufficient for vesicle fusion in central nervous system synapses

Proc. Nat. Acad Sci 108(34), 14318-23 (2011)

Lei, Y., Yang, S., Wu, M., Wilde, G.;
Surface Patterning using Templates: Concept, Properties and Device Applications
Chemical Society Reviews, 40, 1247-1258 (2011)

T. Sun, G. Qing, B. Su, L. Jiang;
Functional biointerface materials inspired from nature
Chemical Society Reviews, 40, 2909–2921 (2011)

C. A. Strassert, C.-H. Chien, M. D. Galvez Lopez, D. Kourkoulos, D. Hertel, K. Meerholz, L. De Cola; *Switching on luminescence by the self-assembly of a Pt(II) complex into gelating nanofibers and electroluminescent films*
Angewandte. Chemie International Edition, 50, 946 – 950 (2011)

D. Zhong, F. L. Sousa, A. Müller, L. F. Chi, H. Fuchs
A nanosized molybdenum oxide wheel with a unique electronic- necklace structure: STM study with submolecular resolution
Angewandte Chemie 123, 7156-7159 (2011)

Yang, S.K., Xu, F., Ostendorp, S., Wilde, G., Zhao, H., Lei, Y.;
Template-Confined Dewetting Process to Surface Nanopatterns: Fabrication, Structural Tunability, and Structure-Related Properties
Advanced Functional Materials, 21 (2011) 2446-2455

J.M. Fernández-Hernández, C.-H. Yang, J. Beltrán, V. Lemaur, F. Polo, R. Frölich, J. Cornil,
L. De Cola;
Control of the mutual arrangement of cyclometalated ligands in cationic iridium(III) complexes. Synthesis, spectroscopy and electroluminescence of the different isomers
Journal American Chemical Society, 133 (27), 10543-10558 (2011)

2010

Nermin Seda Kehr, Kristina Riehemann, Jehad El-Gindi, Andreas Schaefer, Harald Fuchs, Hans-Joachim Galla , Luisa De Cola
Cell Adhesion and Cellular Patterning on a Self-Assembled Monolayer of Zeolite L Crystals
Advanced Functional Materials 2010, 20, 2248-2254.
DOI:10.1002/adfm.201000205

M. Mauro, K. C. Schuermann, R. Prétôt, A. Hafner, P. Mercandelli, A. Sironi,
L. De Cola
Complex Ir (III) Salts. A New Class of Luminescent Porous Crystalline Materials
Angewandte Chemie International Edition, 49, 1222-1226 (2010)

K. V. S. Ranganath, J. Kloesges, A. H. Schäfer, F. Glorius
Asymmetric Nanocatalysis: N-Heterocyclic Carbenes as Chiral Modifiers of Fe₃O₄/Pd Nanoparticles

Angewandte Chemie International Edition, 49, Iss.42, p. 7786–7789 (2010)

B. Schulte, M. Tsotsalas, M. Becker, A. Studer, L. De Cola;
Dynamic and Reversible Micro Crystal Assembly via Nitroxide Exchange Reactions
Angewandte Chemie International Edition, 49, 6881–6884 (2010)

Strassert, C. A.; Chien, C.-H.; Galvez-Lopez, M. D.; Kourkoulos, D.; Hertel, D.; Meerholz, K.; De Cola, L.

Switch-on luminescence by self-assembly of a Pt(II) complex into gelating nanofibers and electroluminescent films

Angewandte Chemie International Edition, 50, 946 (2010)

L. Li, M. Hirtz, W. Wang, C. Du, H. Fuchs, L. F. Chi
Patterning of polymer electrodes by nanoscratching

Advanced Materials, 22, 1374–1378 (2010)

W. Wang, C. Du, H. Bi, Y. Sun, Y. Wang, C. Mauser, E. Da Como H. Fuchs, L. F. Chi
Tunable multicolor ordered patterns with two dye molecules

Advanced Materials, 22, 2764–2769 (2010)

M. Woerdemann, S. Gläser, F. Hörner, A. Devaux, L. De Cola, C. Denz
Dynamic and reversible organization of zeolite L crystals induced by holographic optical tweezers

Advanced Materials, 22, 4176–4179 (2010)

M. M. Tsotsalas, K. Kopka, G. Luppi, S. Wagner, M. Law, M. Schäfers, L. De Cola
Encapsulating ¹¹¹In in Nanocontainers for Scintigraphic Imaging: Synthesis, Characterization and In Vivo Biodistribution

ACS Nano, 4, 342–348 (2010)

D. Zhong, K. Wedeking, T. Blömker, G. Erker, H. Fuchs, L. F. Chi
Multilevel supramolecular architectures self-assembled on metal surfaces

ACS Nano 4, 1997–2002 (2010)

H.-Y. Chen, M. Hirtz, X. Deng, T. Laue, H. Fuchs, J. Lahann
Substrate-independent dip-pen nanolithography based on reactive coatings

Journal American Chemical Society 132, 18023–18025 (2010)

D. Jiang, F. Seela;
Oligonucleotide Duplexes and Multi-Strand Assemblies with 8-Aza-2'-deoxyisoguanosine: A Fluorescent isoGd Shape Mimic Expanding the Genetic Alphabet and Forming Ionophores

Journal American Chemical Society 132, 4016 (2010)

L. Li, P. Gao, K. C. Schuermann, S. Ostendorp, W. Wang, C. Du, Y. Lei, H. Fuchs, L. De Cola, K. Müllen, L. F. Chi
Controllable growth and field-effect property of monolayer to multilayer microstripes of an organic semiconductor
Journal American Chemical Society 132, 8807–8809 (2010)

E. Quartapelle Procopio, M. Mauro, M. Panigati, D. Donghi, P. Mercandelli, A. Sironi, G. D'Alfonso, L. De Cola
Highly Emitting Concomitant, and Interconvertible Polymorphic Crystals of a Dinuclear Rhenium Complex
Journal American Chemical Society 132, 14397-14399 (2010)

G. Qing, H. Xiong, F. Seela, T. Sun
Spatially controlled DNA nanopatterns by "click" chemistry using oligonucleotides with different anchoring sites
Journal American Chemical Society 132, 15228–15232 (2010)

I. Barel, M. Urbakh, L. Jansen, A. Schirmeisen
Multibond dynamics of nanoscale friction: The role of temperature
Physical Review Letters 104, 066104-(4pp) (2010)

R. Frigge, T. Hoger, B. Siemer, H. Witte, M. Silies, H. Zacharias, T. Olsen, J. Schiøtz
Site specificity in femtosecond laser desorption of neutral H atoms from graphite (0001)
Physical Review Letters 104, 256102 (2010)

L. Jansen, H. Hölscher, H. Fuchs, A. Schirmeisen
Temperature dependence of atomic-scale stick-slip friction
Physical Review Letters 104, 256101-(4pp) (2010)

2009

H. Gan, K. Tang, T. Sun, M. Hirtz, Y. Li, L. F. Chi, S. Butz, H. Fuchs;
Selective adsorption of DNA on chiral surfaces: Supercoiled or relaxed conformation
Angewandte Chemie International Edition 48, 5282 (2009)

A. Guerrero-Martinez, S. Fibikar, I. Pastoriza-Santos, L. M. Liz-Marzán, L. De Cola
Microcontainers with Fluorescent Anisotropic Zeolite L Cores and Isotropic Silica Shells
Angewandte Chemie International Edition, 48, 1266-1270 (2009) (Cover of the issue)

K. Riehemann, S. W. Schneider, T. A. Luger, B. Godin, M. Ferrari, H. Fuchs;

Nanomedizin – Herausforderung und Perspektiven

Angewandte Chemie 121, 886 (2009)

Nanomedicine – challenge and perspectives

Angewandte Chemie Int. Ed. 48, 872 (2009)

C. Strassert, M. Otter, R. Albuquerque, A. Höne, Y. Vida, B. Maier, L. De Cola

Photoactive hybrid nanomaterials for targeting, labeling and killing antibiotic resistant bacteria

Angewandte Chemie International Edition, 48, 7928-7931 (2009) (VIP Paper).

C. Tao, J. Sun, X. Zhang, R. Yamachika, D. Wegner, Y. Bahri, G. Samsonidze, M. L.

Cohen, S. G. Louie, T. D. Tilly, R. A. Siegalman, and M. F. Crommie;

Spatial resolution of a type II heterojunction in a single bipolar molecule,

Nano Letters 9, 3963 (2009)

D. Zhong, T. Blömker, K. Wedeking, L. F. Chi, G. Erker, H. Fuchs;

Surface-Mounted molecular rotors with variable functional groups and rotation radii

Nano Letters 9, 4387-4391 (2009)

D. Y. Zhong, J. Franke, T. Blömker, G. Erker, L. F. Chi, H. Fuchs;

Manipulating surface diffusion ability of single molecules by scanning tunneling microscopy

Nano Letters 9, 132-136 (2009)

F. Cucinotta, Z. Popovic, E. Weiss, G. Whitesides, L. De Cola

Micro-Contact Transfer Printing of Zeolite Monolayers

Advanced Materials, 21, 1142-1145 (2009)

W. Wang C. Du, D. Zhong, M. Hirtz, Y. Wang, N. Lu, L. Wu, D. Ebeling, L. Li, H. Fuchs,

L. F. Chi;

Control over patterning of organic semiconductors: step edge induced area selective growth

Advanced Materials, 21, 4721 (2009)

B. B. Zhang, Y.-Y. Weng, X.-P. Huang, M. Wang, R.-W. Peng, N.-B. Ming, B. Yang, N. Lu, L. F. Chi

Creating in-plane metallic-nanowire arrays by corner-mediated electrodeposition

Advanced Materials, 21, 3576 (2009)

G. Qing, X. Wang, H. Fuchs, T. Sun

Nucleotide-responsive wettability on a smart polymer surface

Journal American Chemical Society 131, 8370 (2009)

L. Jansen, A. Schirmeisen, J. L. Hedrick, M. A. Lantz, A. Knoll, R. Cannara, B. Gotsmann

Nanoscale frictional dissipation into shear-stressed polymer relaxations

Physical Review Letters 102, 236101-(4pp) (2009)

D. Wegner, R. Yamachika, X. Zhang, Y. Wang, T. Baruah, M. R. Pederson, B. M. Bartlett,

J. R. Long, and M. F. Crommie

Tuning Molecule-Mediated Spin Coupling in Bottom-Up Fabricated Vanadium-TCNE Nanostructures

Physical Review Letters 103, 087205 (2009)

2008

M. Busby, C. Blum, M. Tibben, S. Fibikar, G. Calzaferri, V. Subramaniam, L. De Cola
Time, Space and Spectrally Resolved Studies on J-Aggregate Interactions in Zeolite-L Nanochannels

J. Am. Chem. Soc., 130, 10970-10976 (2008)

K. Tang, Y. Li, H. Gun, L. F. Chi, T. Sun, H. Fuchs

Stereoselective Interaction between DNA and Chiral Surfaces

Journal American Chemical Society 130, 11284 (2008)

K. Tang, J. Zhang, W. Yan, Z. Li, Y. Wang, W. Yang, Z. Xie, T. Sun, H. Fuchs

One-step controllable synthesis for high-quality ultrafine metal oxide semiconductor nanocrystals via a separated two-phase hydrolysis reaction

Journal American Chemical Society 130, 2676 (2008)

D. Wegner, R. Yamachika, Y. Wang, V. W. Brar, B. M. Bartlett, J. R. Long, and M. F. Crommie

Single-Molecule Charge Transfer and Bonding at an Organic/Inorganic Interface: Tetracyanoethylene on Noble Metals,

Nano Letters 8, 131 (2008).

M. Busby, H. Kerschbaumer, G. Calzaferri, L. De Cola

Orthogonally Bi-Functional Fluorescent Zeolite-L Micro-Crystals

Advanced Materials, 20, 1614-1618 (2008)

S. Bedwani, D. Wegner, M. F. Crommie, and A. Rochefort

Strongly reshaped organic-metal interfaces: Tetracyanoethylene on Cu(100)

Physical Review Letters 101, 216105 (2008)

D. Dietzel, C. Ritter, T. Mönninghoff, H. Fuchs, A. Schirmeisen, U. D. Schwarz

Frictional duality observed during nanoparticle sliding

Physical Review Letters 101, 125505 (2008)

H. Hölscher, D. Ebeling, U. D. Schwarz

Friction at atomic-scale surface steps: Experiment and theory

Physical Review Letters 101, 246105 (2008)

M. Konopka, R. Turansky, J. Reichert, H. Fuchs, D. Marx, I. Stich

Mechanochemistry and thermochemistry are different: Stress-induced strengthening of chemical bonds

Physical Review Letters 100, 115503 (2008)

K. Ruschmeier, A. Schirmeisen, R. Hoffmann

Atomic scale force vector fields

Physical Review Letters 101, 156102 (2008)

2007

Z. Popovic, M. Busby, S. Huber, G. Calzaferri, L. De Cola

Assembling Micro Crystals via Cooperative Coordinative Interactions

Angewandte Chemie International Edition, 46, 8898-8902 (2007)

Z. Popovic, M. Otter, G. Calzaferri, L. De Cola

Self-assembling living systems with functional nanomaterials

Angewandte Chemie International Edition, 46, 6188-6191 (2007)

X. Chen, S. Lenhert, M. Hirtz, N. Lu, H. Fuchs, L. F. Chi

Langmuir-Blodgett Patterning: A bottom-up Way to build Mesostructures over large Areas

Accounts of Chemical Research, 40, 393 (2007)

X. Chen, M. Hirtz, A. L. Rogach, D. V. Talapin, H. Fuchs, L. F. Chi

Correlating dynamics and selectivity in adsorption of semiconductor nanocrystals onto a self-organized pattern

Nano Letters 7, 3483 (2007)

W. Hu, N. Lu, H. Zhang, Y. Wang, N. Kehagias, V. Reboud, C. M. Sotomayor Torres, J. Hao, W. Li, H. Fuchs, L. F. Chi

Multicolor emission on prepatterned substrates using a single dye species

Advanced Materials 19, 2119 (2007)

I.V. Avilov, P. Minoofar, J. Cornil, L. De Cola

Influence of substituents on the energy and nature of the lowest excited states of heteroleptic phosphorescent Ir(III) complexes: A joint theoretical and experimental study

Journal American Chemical Society 129, 8247-8258 (2007)

K. O. Siegenthaler, A. Schäfer, A. Studer

Chemical surface modification via radical C-C bond-forming reactions
Journal American Chemical Society 129, 5826 (2007).

T. Sun, D. Han, K. Riehemann, L. F. Chi, H. Fuchs

Stereospecific interaction between immune cells and chiral surfaces
Journal American Chemical Society 129, 1496 (2007)

A. Schirmeisen, A. Taskiran, H. Fuchs, H. Bracht, S. Murugavel, B. Roling

Fast interfacial ionic conduction in nanostructured glass ceramics
Physical Review Letters 98, 225901 (2007)

W. C. Wang, D. Y. Zhong, J. Zhu, F. Kalischewski, R. F. Dou, K. Wedeking, Y. Wang,
A. Heuer, H. Fuchs, G. Erker, L. F. Chi

Patterned nucleation control in vacuum deposition of organic molecules
Physical Review Letters 98, 225504 (2007)

Lei, Y., Cai, W.P. and Wilde, G.

Highly ordered nanostructures with tunable size, shape and properties: a new way to surface nano-patterning with a non-lithographic method.

Progress in Materials Science, 52, 465-539 (2007)