

## Further recent high impact publications by CeNTech scientists:

### Chemical Society Reviews

#### 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)

### Progress in Materials Science

#### 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)

### Angewandte Chemie

#### 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)

#### 2010

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 Fe<sub>3</sub>O<sub>4</sub>/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)

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)

## 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).

## 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)

## Accounts of Chemical Research

### 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)

## Nano Letters

### 2009

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)

## **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).

## **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)

## **Advanced Materials**

### **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. Gläsener, 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)

### **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)

## 2008

M. Busby, H. Kerschbaumer, G. Calzaferri, L. De Cola  
*Orthogonally Bi-Functional Fluorescent Zeolite-L Micro-Crystals*  
Advanced Materials, 20, 1614-1618 (2008)

## 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)

## ACS Nano

### 2010

M. M. Tsotsalas, K. Kopka, G. Luppi, S. Wagner, M. Law, M. Schäfers, L. De Cola  
*Encapsulating <sup>111</sup>In 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)

## Journal of the American Chemical Society

### 2011

J.M. Fernández-Hernández, C.-H. Yang, J. Beltrán, V. Lemaury, 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

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)

#### 2009

G. Qing, X. Wang, H. Fuchs, T. Sun  
*Nucleotide-responsive wettability on a smart polymer surface*  
Journal American Chemical Society 131, 8370 (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)

#### 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)

### Physical Review Letters

#### 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

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

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

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)