Publications

Peer-reviewed Articles

36) Jochen Willersinn, Bernhard V. K. J. Schmidt:*
Self-assembly of double hydrophilic poly(*N*-vinylpyrrolidone)-*b*-poly(2-ethyl-2-oxazoline) block copolymers in aqueous solution
Polymers **2017**,*9* (7), 293.
Invited article: Special issue “Polymers and Block Copolymers at Interfaces and Surfaces”

35) Bernhard V. K. J. Schmidt,* Dennis Kugele, Jonas von Irmer, Jan Steinkönig, Christian Rüttiger, Hatice Mutlu, Craig J. Hawker,* Markus Gallei,* Christopher Barner-Kowollik:*
Dual-Gated Supramolecular Star Polymers in Aqueous Solution
Macromolecules **2017**, *50* (6), 2375-2386.

34) Baris Kumru, Menny Shalom,* Markus Antonietti, Bernhard V.K.J. Schmidt:*
Responsive and Reinforced Hydrogels via Carbon-Nitride Initiated Polymerization
Macromolecules **2017**, *50* (5), 1862-1869.

33) Bernhard V. K. J. Schmidt,* Valerio Molinari, Davide Esposito, Klaus Tauer, Markus Antonietti:
Lignin-derived polymeric surfactants for emulsion polymerization of styrene
Polymer **2017,** *112*, 418-426.

32) Jochen Willersinn, Anna Bogomolova, Marc Brunet Cabré, Bernhard V. K. J. Schmidt:*
Vesicles of double hydrophilic pullulan and poly(acrylamide) block copolymers: A combination of synthetic- and bio-derived blocks
Polymer Chemistry **2017**, *8*, 1244-1254.
Highlighted as paper of the month in *Polymer Chemistry*

31) Jingwen Sun, Bernhard V. K. J. Schmidt,* Xin Wang,* Menny Shalom:*
Self-standing Carbon Nitride-based Hydrogels with High Photocatalytic Activity
ACS Applied Materials and Interfaces **2017**, *9*, 2029-2034.

30) Takuya Murakami, Bernhard V. K. J. Schmidt, Hugh Brown, Craig J. Hawker:*
Structural Versatility in Slide-Ring Gels: Influence of Co-threaded Cyclodextrin Spacers
Journal of Polymer Science, Part A: Polymer Chemistry **2017**, *55*, 1156-1165.

29) Hui-Chun Lee, Markus Antonietti, Bernhard V. K. J. Schmidt:*
A Cu(II) Metal-Organic-Framework as Recyclable Catalyst for ARGET ATRP
Polymer Chemistry **2016**, *7* (47), 7199-7203.

28) Kaila M. Mattson, Christian W. Pester, Andy Hsueh, Emre H. Discekici, Yingdong Luo, Bernhard V. K. J. Schmidt, Alaina J. McGrath, Paul G. Clark, Craig J. Hawker:*
Metal-free removal of polymer chain ends using light
Macromolecules **2016**, *49,* 8162-8166.

27) Weiyi Zhang, Zdarvko Kochovski, Bernhard V. K. J. Schmidt, Markus Antonietti, Jiayin Yuan:*
Crosslinked 1,2,4-triazolium-type poly(ionic liquid) nanoparticles
Polymer **2016**, *107*, 509-516.

26) Weiyi Zhang, Zdarvko Kochovski, Yan Lu, Bernhard V. K. J. Schmidt,* Markus Antonietti, Jiayin Yuan:*
Internal Morphology-Controllable Self-Assembly in Poly(Ionic Liquid) Nanoparticles
ACS Nano **2016**, *10* (8), 7731-7737.

25) Jochen Willersinn, Markus Drechsler, Markus Antonietti,* Bernhard V. K. J. Schmidt:*
Organized polymeric submicron particles via self-assembly and crosslinking of double hydrophilic poly(ethylene oxide)-*b*-poly(*N*-vinylpyrrolidone) in aqueous solution
Macromolecules **2016**, *49* (15), 5331-5341.

24) Jimmy Lawrence, Allison Abdilla, Sang-Ho Lee, Mitchell Nothling, Carolin Fleischmann, Youli Li, Austin Abrams, Bernhard V. K. J. Schmidt, Michael C. Hawker, Luke A. Connal, Alaina J. McGrath, Paul G. Clark, Will R. Gutekunst,* Craig J. Hawker:*
A Versatile and Scalable Strategy to Discrete Oligomers
Journal of the American Chemical Society **2016**, *138*, 6306-6310.

23) Takuya Murakami, Bernhard V. K. J. Schmidt, Hugh Brown, Craig J. Hawker:*
One-Pot “Click” Fabrication of Slide-Ring Gels
Macromolecules **2015**, *48* (21), 7774-7781.

22) Astrid F. Hirschbiehl, Waldemar Konrad, Steffen Wiedemann, David Schulze-Suenninghausen, Burkhard Luy, Bernhard V.K.J. Schmidt,* Christopher Barner-Kowollik:*
Access to Multiblock Copolymers via Supramolecular Host-Guest Chemistry and Photochemical Ligation
ACS Macro Letters **2015***, 4,* 1062-1066*.*

21) Doris Abt, Bernhard V.K.J. Schmidt, Ognen Pop-Georgievski, Alexander S. Quick, Denis Danilov, Nina Y. Kostina, Michael Bruns, Wolfgang Wenzel, Martin Wegener, Cesar Rodriguez-Emmenegger,* Christopher Barner-Kowollik:*
Designing Printboards: A Photolithographic Platform for Recodable Surfaces
Chemistry – A European Journal **2015***, 21* (38),13186-13190.

20) Bernhard V. K. J. Schmidt,[+] Johannes Elbert,[+] Daniel Scheid, Craig J. Hawker,* Daniel Klinger,* Markus Gallei:*
Metallopolymer-based Shape Anisotropic Nano Particles
ACS Macro Letters **2015***, 4*, 731-735.
Highlighted on the Cover Page, (+ indicates shared contribution)

19) Astrid F. Hirschbiehl, Bernhard V.K.J. Schmidt, Peter Krolla-Sidenstein, James Blinco, Christopher Barner-Kowollik:*
Photochemical Design of Stimuli Responsive Nanoparticles Prepared by Supramolecular Host-Guest Chemistry
Macromolecules **2015**, *48* (13), 4410-4420.

18) Florian Szillat, Bernhard V. K. J. Schmidt, Artur Hubert, Christopher Barner-Kowollik,* Helmut Ritter:*
Redox-Switchable Supramolecular Graft Polymer Formation via Ferrocene-Cyclodextrin Assembly
Macromolecular Rapid Communications **2014**, *35* (14), 1293-1300.

17) Johannes Willenbacher, Bernhard V. K. J. Schmidt, David Schulze-Suenninghausen, Ozcan Altintas, Burkhard Luy, Guillaume Delaittre, Christopher Barner-Kowollik:*
Reversible single-chain selective point folding via cyclodextrin host-guest chemistry in water
Chemical Communications **2014**, *50* (53), 7056-7059.

16) Eva Blasco, Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik,* Milagros Piñol, Luis Oriol:*
A Novel Photo-Responsive Azobenzene-Containing Miktoarm Star Polymer: Self-Assembly and Photoresponse Properties
Macromolecules **2014**, *47* (11), 3693-3700.

15) Bernhard V. K. J. Schmidt, Johannes Elbert, Christopher Barner-Kowollik,* Markus Gallei:*
Individually Addressable Thermo- and Redox-Responsive Block Copolymers by Combining Anionic Polymerization and RAFT Protocols
Macromolecular Rapid Communications **2014***, 35* (7)*,* 708-714.

14) Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik:*
Supramolecular X- and H-Shape Star Block Copolymers via Cyclodextrin-Driven Supramolecular Self-Assembly
Polymer Chemistry **2014**, *5,* 2461-2472.

13) Martin Hetzer, Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik,* Helmut Ritter:*
Supramolecular Polymer Networks of Building Blocks Prepared via RAFT Polymerization
Polymer Chemistry **2014**, *5,* 2142-2152.

12) Martin Hetzer, Carolin Fleischmann, Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik,* Helmut Ritter:*
Visual Recognition of Supramolecular Graft Polymer Formation via Phenolphthalein-Cyclodextrin Association
Polymer **2013**, *54* (19), 5141-5147.

11) Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter,* Christopher Barner-Kowollik:*
Modulation of the Thermoresponsive Behavior of Guest-Functionalized Poly(*N*,*N*-diethylacrylamide) via Cyclodextrin Host/Guest Interactions
Macromolecular Rapid Communications **2013**, *34* (16). 1306-1311.

10) Eva Blasco, Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik,* Milagros Piñol,* Luis Oriol:
Dual Thermo- and Photo-Responsive Micelles Based on Miktoarm Star Polymers
Polymer Chemistry **2013**, *4,* 4506-4514.

9) Eva Blasco, Milagros Piñol, Luis Oriol,* Bernhard V. K. J. Schmidt, Alexander Welle, Vanessa Trouillet, Christopher Barner-Kowollik:*
Photochemical Generation of Light Responsive Surfaces
Advanced Functional Materials **2013**, *23* (32)*,* 4011-4019.

8) Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter,* Christopher Barner-Kowollik:*
UV-Light and Temperature Supramolecular ABA Triblock Copolymers via Reversible Cyclodextrin Complexation
Macromolecules **2013**, *46* (3), 1054-1065.

7) Martin Hetzer, Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik,* Helmut Ritter:*
Limitations of Cyclodextrin Mediated RAFT Homopolymerization and Block Copolymer Formation
Journal of Polymer Science A: Polymer Chemistry **2013**, *51* (11), 2504-2517.

6) Bernhard V. K. J. Schmidt, Tobias Rudolph, Martin Hetzer, Helmut Ritter,* Felix H. Schacher,* Christopher Barner-Kowollik:*
Supramolecular Three-Armed Star Polymers via Cyclodextrin Host/Guest Self-Assembly
Polymer Chemistry **2012**, *3,* 3139-3145.

5) Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter,* Christopher Barner-Kowollik:*
Miktoarm Star Polymers via Cyclodextrin-Driven Supramolecular Self-Assembly
Polymer Chemistry **2012**, *3*, 3064-3067.

4) Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter,* Christopher Barner-Kowollik:*
Cyclodextrin-Complexed RAFT Agents for the Ambient Temperature Aqueous Living/Controlled Radical Polymerization of Acrylamido-Monomers
Macromolecules **2011**, *44* (18), 7220-7232.

3) Cesar Rodriguez-Emmenegger,* Bernhard V. K. J. Schmidt, Zdenka Sedlákova, Vladimir Šubr, Aldo Bologna Alles, Eduard Brynda,* Christopher Barner-Kowollik:*
Low Temperature Aqueous Living/Controlled (RAFT) Polymerization of Carboxybetaine Methacrylamide up to High Molecular Weights
Macromolecular Rapid Communications **2011**, *32* (13), 958-965.

2) Bernhard V. K. J. Schmidt, Nina Fechler, Jana Falkenhagen, Jean-François Lutz:*
Controlled folding of synthetic polymer chains through the formation of positionable covalent bridges
Nature Chemistry **2011**, *3* (3), 234-238.
Highlighted: S. Perrier *Nature Chemistry* **2011**, *3* (3), 194-196.

1) Markus Gallei, Bernhard V. K. J. Schmidt, Roland Klein, Matthias Rehahn:*
Defined Poly[styrene-*block*-(ferrocenylmethyl methacrylate)] Diblock Copolymers via Living Anionic Polymerization
Macromolecular Rapid Communications **2009**, *30* (13), 1463-1469.

Reviews/Feature Articles

3) Bernhard V. K. J. Schmidt,* Christopher Barner-Kowollik:*
Dynamic Macromolecular Material Design – The Versatility of Cyclodextrin Based Host/Guest Chemistry
Angewandte Chemie, International Edition **2017**, *56* (29), 8350–8369.

Dynamisches makromolekulares Materialdesign – die Vielseitigkeit von Cyclodextrin-basierter Wirt-Gast-Chemie
Angewandte Chemie **2017**, *129* (29), 8468–8488.
Highlighted on the Cover Page

2) Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter, Christopher Barner-Kowollik:*
Complex Macromolecular Architecture Design via Cyclodextrin Host/Guest Complexes
Progress in Polymer Science **2014**, *39* (1), 235-249.

1) Jean-François Lutz,* Bernhard V. K. J. Schmidt, Sebastian Pfeifer:
Tailored Polymer Microstructures Prepared by Atom Transfer Radical Copolymerization of Styrene and *N*-substituted Maleimides
Macromolecular Rapid Communications **2011**, *32* (2), 127-135.

Non Peer-reviewed Articles/Highlights

4) Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik:
Living Radical Polymerization of Ethylene: A Challenge Overcome?
ChemCatChem **2014**, *6* (11), 3060-3062.

3) Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter, Christopher Barner-Kowollik:
Multi Responsive Macromolecular Linear and H-Shape Architectures via Cyclodextrin Host/Guest Chemistry
PMSE Preprints **2014**, *111.*

2) Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik:
Polymer Chemistry: Macromolecules made to order
Nature Chemistry **2013**, *5* (12), 990–992.

1) Markus Gallei, Bernhard V. K. J. Schmidt, Roland Klein, Matthias Rehahn:
Defined Poly(Styrene-*b*-Ferrocenylmethyl methacrylate) Diblock Copolymers via Living Anionic Polymerization
Polymer Preprints **2009**, *50*(2), 456-457.

Books/Bookchapters

3) Bernhard V. K. J. Schmidt:
Supramolecular (Miktoarm) Star Polymers: Self-Assembly and Applications
in “Miktoarm Star Polymers”, Ashok Kakkar Ed.
RSC **2017**

2) Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik:
A Supramolecular Approach to Macromolecular Self-Assembly: Cyclodextrin Host/Guest Complexes
in “Macromolecular Self-Assembly”, Laurent Billon and Oleg Borisov Eds.
Wiley **2016**

1) Bernhard V. K. J. Schmidt:
Novel Macromolecular Architectures via a Combination of Cyclodextrin Host/Guest Complexation and RAFT (Springer Theses)
Springer **2014**

Invited lectures

Controlled polymerizations as an avenue to functional polymers, Marie Curie ITN Eurosequences Education Tutorial Session, Berlin, Germany **05.-06.04.2016**

Oral communications

Polymer Synthesis, Self-Assembly and Gel Formation for Novel Soft Materials, Evonik meets academia, Max-Planck-Institute of Colloids and Interfaces, Potsdam, Germany, **27.04.2017**

ATRP in Confined Spaces and Double Hydrophilic Block Copolymer Self-Assembly, Matyjaszewski Group, Carnegie Mellon University, Pittsburgh, USA **24.02.2017**

Conference and poster presentations

Jochen Willersinn, Bernhard V. K. J. Schmidt
Novel self-assemblies via double hydrophilic block copolymers in aqueous solution
Advanced Polymers via Macromolecular Engineering, Ghent, Belgium, **2017**

Bernhard V. K. J. Schmidt, Hui-Chun Lee, Jongkook Hwang, Markus Antonietti (invited poster)
Reversible Deactivation Radical Polymerization in Confined Space
Japanese-German Frontiers of Science Symposium, Potsdam, Germany **2016**

Bernhard V. K. J. Schmidt, Daniel Klinger, Cynthia X. Wang, Glenn H. Fredrickson, Edward J. Kramer, Craig J. Hawker:
Functional ellipsoidal nanoparticles via block copolymer/homopolymer blends
American Chemical Society National Meeting, San Francisco, USA **2014**

Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter, Christopher Barner-Kowollik:
Multi Responsive Macromolecular Linear and H-Shape Architectures via Cyclodextrin Host/Guest Chemistry
American Chemical Society National Meeting, San Francisco, USA **2014**

Bernhard V. K. J. Schmidt, Johannes Elbert, Christopher Barner-Kowollik, Markus Gallei:
Individually Addressable Thermo- and Redox-Responsive Block Copolymers by Combining Anionic Polymerization and RAFT Protocols
American Chemical Society National Meeting, San Francisco, USA **2014**

Bernhard V. K. J. Schmidt, Tobias Rudolph, Martin Hetzer, Helmut Ritter, Felix H. Schacher, Christopher Barner-Kowollik:
Supramolecular Three-Armed Star Polymers via Cyclodextrin Host/Guest Self-Assembly
Smart Polymers: Biennial Meeting of the GDCh-Division of Macromolecular Chemistry, Mainz, Germany **2012**

Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter, Christopher Barner-Kowollik:
Miktoarm Starpolymers via Cyclodextrin-Driven Supramolecular Self-Assembly
Macrogroup UK International Conference on Polymer Synthesis & UKPCF International Conference on Polymer Colloids, Warwick, UK **2012**

Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter, Christopher Barner-Kowollik:
Cyclodextrin-Complexed RAFT Agents for the Ambient Temperature Aqueous Living/Controlled Radical Polymerization of Acrylamido-Monomers
Bayreuth Polymer Symposium, Bayreuth, Germany **2011**