

## List of publications of W.Schärtl

(most important publications have been highlighted)

<b>A)</b>	<b>Journal articles</b>	Web-of-Science, last updated: 02-2024			<b><u>cit.</u></b>
1	Schaertl, W; Sillescu, H Dynamics of colloidal hard-spheres in thin aqueous suspension layers – particle tracking by digital image- processing and Brownian dynamics computer simulations JOURNAL OF COLLOID AND INTERFACE SCIENCE	155	313-318	<b>1993</b>	<b>38</b>
2	Schaertl, W; Sillescu, H Brownian dynamics simulations of colloidal hard-spheres – effects of sample dimensionality on selfdiffusion JOURNAL OF STATISTICAL PHYSICS	74	687-703	<b>1994</b>	<b>32</b>
3	Schaertl, W; Sillescu, H Brownian dynamics of polydisperse colloidal hard-spheres – equilibrium structures and random close packings JOURNAL OF STATISTICAL PHYSICS	77	1007-1025	<b>1994</b>	<b>142</b>
4	Schaertl, W Brownian dynamics of colloidal hard-spheres .3. extended investigations at the phase-transition regime JOURNAL OF STATISTICAL PHYSICS	79	299-312	<b>1995</b>	<b>6</b>
5	Schaertl, W; Tsutsumi, K; Hashimoto, T Self-diffusion of spherical block-copolymer micelles ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY	209	356	PHYS <b>1995</b>	<b>0</b>
6	Kirsch, S; Frenz, V; Schartl, W; Bartsch, E; Sillescu, H Multispeckle autocorrelation spectroscopy and its application to the investigation of ultraslow dynamical processes JOURNAL OF CHEMICAL PHYSICS	104	1758-1761	<b>1996</b>	<b>86</b>

<b>7</b>	Smalley, MV; Scharl, W; Hashimoto, T Sogami potential and membrane equilibria LANGMUIR	12	1331-1335	<b>1996</b>	<b>3</b>
<b>8</b>	Smalley, MV; Scharl, W; Hashimoto, T Salt fractionation effect for spherical macroions LANGMUIR	12	2340-2347	<b>1996</b>	<b>6</b>
<b>9</b>	Schaertl, W; Tsutsumi, K; Kimishima, K; Hashimoto, T FRS study of diffusional processes in block copolymer/homopolymer blends containing glassy spherical micelles MACROMOLECULES	29	5297-5305	<b>1996</b>	<b>17</b>
<b>10</b>	Bartsch, E; Frenz, V; Baschnagel, J; Scharl, W; Sillescu, H The glass transition dynamics of polymer micronetwork colloids. A mode coupling analysis JOURNAL OF CHEMICAL PHYSICS	106	3743-3756	<b>1997</b>	<b>80</b>
<b>11</b>	Scharl, WG; Roos, C; Gohr, K Oscillating time correlation functions from dynamic light scattering of gold-labeled tracers JOURNAL OF CHEMICAL PHYSICS	108	9594-9597	<b>1998</b>	<b>7</b>
<b>12</b>	Scharl, W Structure and diffusion of copolymer micelles in entangled homopolymer chains MACROMOLECULAR CHEMISTRY AND PHYSICS 200	481	500	<b>1999</b>	<b>8</b>
<b>13</b>	Graf, C; Scharl, W; Fischer, K; Hugenberg, N; Schmidt, M Core-shell organosilicone-mu-networks with a dye labeled core ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY	217	U449	<b>1999</b>	<b>0</b>
<b>14</b>	Schaertl, W; Roos, C Convection and thermodiffusion of colloidal gold tracers by laser light scattering PHYSICAL REVIEW E	60	2020-2028	<b>1999</b>	<b>40</b>

<b>15</b>	Graf, C; Scharrtl, W; Fischer, K; Hugenberg, N; Schmidt, M <b>Dye-labeled poly(organosiloxane) microgels with core-shell architecture</b>	LANGMUIR	15	6170-6180	<b>1999</b>	<b>73</b>
<b>16</b>	Gohr, K; Pakula, T; Tsutsumi, K; Scharrtl, W Dynamics of copolymer micelles in an entangled homopolymer matrix	MACROMOLECULES	32	7156-7165	<b>1999</b>	<b>40</b>
<b>17</b>	Graf, C; Scharrtl, W; Maskos, M; Schmidt, M Tracer diffusion of polyorganosiloxane nanoparticles in solution: Effects of tracer topology and particle concentration	JOURNAL OF CHEMICAL PHYSICS	112	3031-3039	<b>2000</b>	<b>24</b>
<b>18</b>	Gohr, K; Scharrtl, W Dynamics of copolymer micelles in a homopolymer melt: Influence of the matrix molecular weight	MACROMOLECULES	33	2129-2135	<b>2000</b>	<b>33</b>
<b>19</b>	Graf, C; Scharrtl, W; Hugenberg, N Photoinduced cluster formation of coumarin-labeled organosilicon micronetworks	ADVANCED MATERIALS	12	1353-1356	<b>2000</b>	<b>14</b>
<b>20</b>	Wurthner, F; Thalacker, C; Sautter, A; Scharrtl, W; Ibach, W; Hollricher, O Hierarchical self-organization of perylene bisimide-melamine assemblies to fluorescent mesoscopic superstructures	CHEMISTRY-A EUROPEAN JOURNAL	6	3871-3886	<b>2000</b>	<b>237</b>
<b>21</b>	Spill, R; Kohler, W; Lindenblatt, G; Scharrtl, W Thermal diffusion and Soret feedback of gold-doped polyorganosiloxane nanospheres in toluene	PHYSICAL REVIEW E	62	8361-8368	<b>2000</b>	<b>29</b>
<b>22</b>	Lindenblatt, G; Scharrtl, W; Pakula, T; Schmidt, M <b>Synthesis of polystyrene-grafted polyorganosiloxane microgels and their compatibility with linear polystyrene chains</b>	MACROMOLECULES	33	9340-9347	<b>2000</b>	<b>70</b>

<b>23</b>	Schartl, W					
	<b>Crosslinked spherical nanoparticles with core-shell topology</b>					
	ADVANCED MATERIALS	12	1899	+	<b>2000</b>	<b>251</b>
<b>24</b>	Lindenblatt, G; Schartl, W; Pakula, T; Schmidt, M					
	Structure and dynamics of hairy spherical colloids in a matrix of nonentangled linear chains					
	MACROMOLECULES	34	1730-1736		<b>2001</b>	<b>50</b>
<b>25</b>	Hugenberg, N; Loske, S; Muller, AHE; Schartl, W; Schmidt, M; Simon, PFW; Strack, A; Wolf, BA					
	Synthesis and large scale fractionation of non-linear polymers: brushes and hyperbranched polymers					
	JOURNAL OF NON-CRYSTALLINE SOLIDS307	765	771		<b>2002</b>	<b>9</b>
<b>26</b>	Gohr, K; Schartl, W; Willner, L; Pyckhout-Hintzen, W					
	SANS investigation of PS-PB block copolymer micelles in a short chain PB homopolymer matrix					
	MACROMOLECULES	35	9110-9116		<b>2002</b>	<b>17</b>
<b>27</b>	Yezek, L; Schartl, W; Chen, YM; Gohr, K; Schmidt, M					
	Influence of hair density and hair length on interparticle interactions of spherical polymer brushes in a homopolymer matrix					
	MACROMOLECULES	36	4226-4235		<b>2003</b>	<b>48</b>
<b>28</b>	Yuan, XF; Fischer, K; Schartl, W					
	Reversible cluster formation of colloidal nanospheres by interparticle photodimerization					
	ADVANCED FUNCTIONAL MATERIALS	14	457-463		<b>2004</b>	<b>27</b>
<b>29</b>	Yuan, XF; Fischer, K; Schartl, W					
	<b>Photocleavable microcapsules built from photoreactive nanospheres</b>					
	LANGMUIR	21	9374-9380		<b>2005</b>	<b>64</b>
<b>30</b>	Schaertl, Wolfgang					
	From photo-reactive nanoparticles to photo-cleavable microcapsules					
	ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 231				<b>2006</b>	<b>0</b>

- 31** Berger, R.; Cheng, Y.; Foerch, R.; Gotsmann, B.; Gutmann, J. S.; Pakula, T.; Rietzler, U.; Schaertl, W.; Schmidt, M.; Strack, A.; Windeln, J.; Butt, H. -J.  
Nanowear on polymer films of different architecture  
LANGMUIR 23 3150-3156 **2007** **54**
- 32** Yuan, Xiaofeng; Schnell, Matthias; Muth, Sandra; Schaertl, Wolfgang  
Cluster formation and rheology of photoreactive nanoparticle dispersions  
LANGMUIR 24 5299-5305 **2008** **12**
- 33** Grimm, A.; Nowak, C.; Hoffmann, J.; Scharl, W.  
Electrophoretic mobility of gold nanoparticles in thermoresponsive hydrogels  
MACROMOLECULES 42 6231-6238 **2009** **18**
- 34** Schwaegler, M.; Nowak, C.; Hoffmann, J.; Schaertl, W.  
Enhanced gold nanoparticle mobility in thermoresponsive hydrogels caused by localized light-to-heat conversion, leading to a superdiffusive particle transport  
JOURNAL OF PHYSICAL CHEMISTRY C 113 15124-15132 **2009** **7**
- 35** Grosserueschkamp, Marc; Nowak, Christoph; Schach, Denise; Schaertl, Wolfgang; Knoll, Wolfgang; Naumann, Renate L. C.  
Silver surfaces with optimized surface enhancement by self-assembly of silver nanoparticles for spectroelectrochemical applications  
JOURNAL OF PHYSICAL CHEMISTRY C 113 17698-17704 **2009** **10**
- 36** Marksteiner, D.; Wasser, S.; Schaertl, W.  
Photochemical gluing of colloidal particles by a simple interparticle polymerization route  
LANGMUIR 25 12843-12846 **2009** **2**
- 37** Schaertl, Wolfgang; Xie, Renguo; Ren, Ting; Sejfic, Mirsada; Wenz, Gerhard; Heisel, Ronny; Scherer, Christian; Maskos, Michael; Fischer, Karl; Basche, Thomas  
Water-soluble, cyclodextrin-functionalized semiconductor nanocrystals: Preparation and pH-dependent aggregation and emission properties  
JOURNAL OF LUMINESCENCE 129 1428-1434 **2009** **6**

<b>38</b>	Schaertl, Wolfgang				
	<b>Current directions in core-shell nanoparticle design</b>				
	NANOSCALE	2	829-843	<b>2010</b>	<b>274</b>
<b>39</b>	Ren, Ting; Erker, Wolfgang; Basche, Thomas; Scharl, Wolfgang				
	Synthesis and spectroscopic properties of silica-dye-semiconductor nanocrystal hybrid particles				
	LANGMUIR	26	17981-17988	<b>2010</b>	<b>2</b>
<b>40</b>	Cardenas-Daw, Carlos; Kroeger, Anja; Schaertl, Wolfgang; Froimowicz, Pablo; Landfester, Katharina				
	Reversible photocycloadditions, a powerful tool for tailoring (nano)materials				
	MACROMOLECULAR CHEMISTRY AND PHYSICS	213	144-156	<b>2012</b>	<b>39</b>
<b>41</b>	Eckelt, Anja; Eckelt, John; Schaertl, Wolfgang; Wolf, Bernhard A.				
	On the incompatibility of dextran and pullulan in aqueous solutions and its modeling				
	MACROMOLECULAR CHEMISTRY AND PHYSICS	213	1206-1215	<b>2012</b>	<b>3</b>
<b>42</b>	Kurzbach, Dennis; Kattnig, Daniel R.; Pfaffenberger, Nane; Schaertl, Wolfgang; Hinderberger, Dariush				
	Highly defined, colloid-like ionic clusters in solution				
	CHEMISTRYOPEN	1	211-214	<b>2012</b>	<b>8</b>
<b>43</b>	Leukel, Sebastian; Panthofer, Martin; Mondeshki, Mihail; Schaertl, Wolfgang; Plana-Ruiz, Sergi; Tremel, Wolfgang				
	Calcium sulfate nanoparticles with unusual dispersibility in organic solvents for transparent film processing				
	Langmuir	34	7096-7105	<b>2018</b>	<b>6</b>
<b>44</b>	Kunz, Simon; Pawlik, Maria; Schaertl, Wolfgang; Seiffert, Sebastian				
	Polymer- vs. colloidal-type viscoelastic mechanics of microgel pastes				
	Colloid and Polymer Science	1	1341-1352	<b>2018</b>	<b>8</b>

## **B) Books (single author):**

**1** **Light Scattering from Polymer Solutions and Nanoparticle Dispersions**

W.Schärtl

Springer Laboratory

Springer **2007**

**2** **Light Scattering from Polymer Solutions and Nanoparticle Dispersions**

W.Schärtl

Springer Laboratory

Springer-Taschenbuch **2010**

**3** **Solution of polymer and nanoparticles light scattering**

W.Schärtl

(see **1**, Chinese Edition)

Machinery Industry Press **2013**

**4** **Basic Physical Chemistry - A Complete Introduction on Bachelor of Science Level**

W.Schärtl

Free ebook, Bookboon **2013**

**5** **Statistical Thermodynamics and Spectroscopy**

W.Schärtl

Free ebook, Bookboon **2015**

## C) Books (coauthor):

- 1 Physikalische Chemie Kapieren (Thermodynamik – Kinetik – Elektrochemie)**  
S.Seiffert, W.Schärtl  
De Gruyter 2021
- 2 Physikalische Chemie Kapieren (Quantenmechanik – Spektroskopie – Statistische Thermodynamik)**  
S.Seiffert, W.Schärtl  
De Gruyter 2024

## D) Book Chapters:

- 1 Nanoparticles with Polymeric Surfaces – fillers and models for ultrasoft colloids**  
W.Schärtl  
in: **Nanoscale Materials**, eds. L.M.Liz-Marzán and P.V.Kamat  
Kluwer Academic Publishers, Boston/Dordrecht/London **2003**
- 2 Nanoscopic Optical Tracers**  
W.Schärtl and S.Schärtl  
in: **Encyclopedia of Nanoscience**, ed. H.S.Nalwa  
American Scientific Publishers **2004**
- 3 Forced Rayleigh Scattering – Principles and Application (Self Diffusion of Spherical Nanoparticles and Copolymer Micelles)**  
W.Schärtl  
in: **Soft-Matter Characterization**, eds. R.Borsali and R.Pecora  
Springer **2008**