

CURRICULUM VITAE

NAME: Aya Mizutani Akimoto (秋元文)

Nationality: Japan



EDUCATION

2005-2010: Keio University, Graduate School of pharmacy, Japan.

2001-2005: Kyoritsu University of Pharmacy (Present: Keio University), Japan.

*2004-2010: Research Student, Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, Japan.

DEGREES

Dr. Pharmacy (2010), Keio University, Japan.

APPOINTMENTS

2015- :Lecturer, Department of Materials Engineering, The University of Tokyo, Japan.

2013-2015: Research Associate, Department of Materials Engineering, The University of Tokyo, Japan.

2012-2013: Project Research Associate, Department of Materials Engineering, The University of Tokyo, Japan.

2010-2012: Special Postdoctoral Researcher, Bioengineering laboratory, RIKEN, Japan.

AWARDS

1. Excellent poster award, The Society of Polymer Science, Japan, Kansai Regional Chapter (2009)
2. Award for young excellence, The Japanese Society for Analytical Chemistry (2008)
3. Encouragement award, Division of Physical Sciences, The Pharmaceutical Society of Japan (2008)
4. Encouragement award, The Society of Life Support Engineering (2007)

SELECTED PUBLICATIONS

- 1) Ryota Tamate, Takeshi Ueki*, Yuzo Kitazawa, Morinobu Kuzunoki, Masayoshi Watanabe, **Aya Mizutani Akimoto**, Ryo Yoshida*, "Photo-dimerization induced dynamic viscoelastic changes of ABA triblock copolymer-based hydrogels for 3D cell culture", ***Chem. Mater.***, 28, 6401-6408 (2016).
- 2) Tsukuru Masuda, **Aya Mizutani Akimoto**, Kenichi Nagase, Teruo Okano, Ryo Yoshida*, "Artificial cilia as autonomous nanoactuators: design of a gradient self-oscillating polymer brush with controlled unidirectional motion", ***Sci. Adv.***, e1600902 (2016).
- 3) **Aya Mizutani Akimoto***, Erika Hasuike (co-first), Hiroto Tada, Kenichi Nagase, Teruo

- Okano, Hideko Kanazawa, Ryo Yoshida*, Design of tetra arm PEG-crosslinked thermoresponsive hydrogel for 3D cell culture, *Anal. Sci.*, *in press*.
- 4) Ko Matsukawa, Tsukuru Masuda, **Aya Mizutani Akimoto***, Ryo Yoshida*, "A surface-grafted thermoresponsive hydrogel in which the surface structure dominates the bulk properties", *Chem. Commun.*, 52, 11064-11067 (2016).
 - 5) Ryota Tamate, **Aya Mizutani Akimoto**, Ryo Yoshida*, "Recent advances of self-oscillating polymeric materials", *Chem. Rec.*, 16, 1852-1867 (2016).
 - 6) Tsukuru Masuda, **Aya Mizutani Akimoto**, Kenichi Nagase, Teruo Okano, Ryo Yoshida*, "Design of self-oscillating polymer brushes and control of the dynamic behaviors", *Chem. Mater.*, 27, 7395-7402 (2015).
 - 7) Tsukuru Masuda, Ayako Terasaki, **Aya Mizutani Akimoto**, Kenichi Nagase, Teruo Okano, Ryo Yoshida*, "Control of swelling-deswelling behavior of self-oscillating gel by designing the chemical structure", *RSC Adv.*, 5, 5781-5787 (2015).
 - 8) Yusuke Shiraki, **Aya Mizutani Akimoto**, Takashi Miyata, Ryo Yoshida*, Autonomous pulsatile flow by peristaltic motion of tubular self-oscillating gels, *Chem. Mater.*, 26, 5441-5443 (2014).
 - 9) Tsukuru Masuda, Mio Hidaka, Yoko Murase, **Aya Mizutani Akimoto**, Kenichi Nagase, Teruo Okano, Ryo Yoshida*, "Self-oscillating polymer brushes", *Angew. Chem. Int. Ed.* 52, 7468-7471 (2013).
 - 10) **Aya Mizutani Akimoto***, Tohru Takarada, Mizuo Maeda, "Preparation of cell-culturing glass surfaces that release branched polyethyleneimine triggered by thiol-disulfide exchange", *Colloids Surf. B: Biointerfaces*, 103, 360-365 (2013).
 - 11) Kenichi Nagase, **Aya Mizutani Akimoto**, Jun Kobayashi, Akihiko Kikuchi, Yoshikatsu Akiyama, Hideko Kanazawa, Teruo Okano*, "Effect of reaction solvent on the preparation of thermo-responsive stationary phase through a surface initiated atom transfer radical polymerization", *J. Chromatogr. A*, 1218, 8617-8628 (2011).
 - 12) **Aya Mizutani**, Kenichi Nagase, Akihiko Kikuchi, Hideko Kanazawa, Yoshikatsu Akiyama, Jun Kobayashi, Masahiko Annaka, Teruo Okano*, "Preparation of thermo-responsive polymer brushes on hydrophilic polymeric beads by surface-initiated atom transfer radical polymerization for a highly resolute separation of peptides", *J. Chromatogr. A*, 1217, 5978-5985 (2010).
 - 13) **Aya Mizutani**, Kenichi Nagase, Akihiko Kikuchi, Hideko Kanazawa, Yoshikatsu Akiyama, Jun Kobayashi, Masahiko Annaka, Teruo Okano*, "Effective separation of peptides using highly dense thermo-responsive polymer brush-grafted porous polystyrene beads", *J. Chromatogr. B*, 878, 2191-2198 (2010).
 - 14) **Aya Mizutani**, Kenichi Nagase, Akihiko Kikuchi, Hideko Kanazawa, Yoshikatsu Akiyama, Jun Kobayashi, Masahiko Annaka, Teruo Okano*, "Thermo-responsive polymer brush-grafted porous polystyrene beads for all-aqueous chromatography", *J. Chromatogr. A*, 1217, 522-529 (2010).

- 15) Hideko Kanazawa*, Mayumi Nishikawa, **Aya Mizutani**, Chikako Sakamoto, Yuko Morita-Murase, Yoshiko Nagata, Akihiko Kikuchi, Teruo Okano, "Aqueous chromatographic system for separation of biomolecules using thermoresponsive polymer modified stationary phase", *J. Chromatogr. A*, 1191, 157-161 (2008).
- 16) **Aya Mizutani**, Akihiko Kikuchi, Masayuki Yamato, Hideko Kanazawa, Teruo Okano*, "Preparation of thermoresponsive polymer brush surfaces and their interaction with cells", *Biomaterials*, 29, 2073-2081 (2008).