



R. Yoshida

The author presented on this page has published his **10. article** in *Angewandte Chemie* in the last 10 years: “Chemomechanical Motion of a Self-Oscillating Gel in a Protic Ionic Liquid”: T. Masuda, T. Ueki, R. Tamate, K. Matsukawa, R. Yoshida, *Angew. Chem. Int. Ed.* **2018**, *57*, 16693; *Angew. Chem.* **2018**, *130*, 16935.



The work of R. Yoshida has been featured on the cover of *Angewandte Chemie*: “Evolved Colloidosomes Undergoing Cell-like Autonomous Shape Oscillations with Buckling”: R. Tamate, T. Ueki, R. Yoshida, *Angew. Chem. Int. Ed.* **2016**, *55*, 5179; *Angew. Chem.* **2016**, *128*, 5265.

## Ryo Yoshida

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<b>Education:</b>	1988 BS, Waseda University, Tokyo, Japan 1993 PhD supervised by Kiyotaka Sakai, Waseda University, Tokyo, Japan (collaborative study supervised by Prof. Teruo Okano, Tokyo Women's Medical University, Tokyo, Japan)
<b>Awards:</b>	<b>2009</b> SPSJ Wiley Award, Society of Polymer Science Japan (SPSJ); <b>2018</b> New Age Technology Award, International Association of Advanced Materials
<b>Research:</b>	Design of functional polymer gels with spatio-temporal structure and development to biomimetic smart soft materials
<b>Hobbies:</b>	Playing classical and acoustic guitars

The most important future application of my research is artificial life.

The secret of being a successful scientist is having a sense of beauty.

I get advice from Zen words.

I admire laws and scenario of nature, life, and cosmos.

My motto is Have originality. “Do not go where the path may lead, go instead where there is no path and leave a trail” (Ralph Waldo Emerson).

Looking back over my career, I feel destiny.

My favorite saying is “Let it be”.

My biggest inspiration is designing a self-oscillating gel.

My favorite way to spend a holiday is playing classical and acoustic guitars.

My favorite name reaction is the Belousov–Zhabotinsky reaction.

My science “heroes” are Albert Einstein, Erwin Schrödinger, Ilya Prigogine, Paul J. Flory, and others.

The most important thing I learned from my students is the flow of time.

The principal aspect of my personality is thoughtfulness.

My favorite author is Steve Jobs as a creator and his way of thinking.

My favorite composers and musicians are Johann Sebastian Bach, Andrés Segovia, Bon Jovi, X JAPAN, Billy Joel, Simon & Garfunkel, The Beatles, and others.

### My 5 top papers:

1. “Comb-Type grafted Hydrogels with Rapid De-Swelling Response to Temperature Changes”: R. Yoshida, K. Uchida, Y. Kaneko, K. Sakai, A. Kikuchi, Y. Sakurai, T. Okano, *Nature* **1995**, *374*, 240. (This polymer network design to improve gel kinetics had a high impact on gel research.)
2. “Self-Oscillating Gel”: R. Yoshida, T. Takahashi, T. Yamaguchi, H. Ichijo, *J. Am. Chem. Soc.* **1996**, *118*, 5134. (My first report of a novel polymer gel which autonomously swells and de-swells periodically in a closed homogeneous solution without any external stimuli—like heartbeat.)
3. “Self-Walking Gel”: S. Maeda, Y. Hara, T. Sakai, R. Yoshida, S. Hashimoto, *Adv. Mater.* **2007**, *19*, 3480. (Application of the self-oscillating gel as an autonomous soft robot.)
4. “Self-Beating Artificial Cells: Design of Cross-Linked Polymersomes Showing Self-Oscillating Motion”: R. Tamate, T. Ueki, R. Yoshida, *Adv. Mater.* **2015**, *27*, 837. (One of a series of attempts to create artificial self-beating cells using the self-oscillating polymer, which would be a significant step in closing the gap between artificial and living cells.)
5. “Amoeba-Like Self-Oscillating Polymeric Fluids with Autonomous Sol-Gel Transition”: M. Onoda, T. Ueki, R. Tamate, M. Shibayama, R. Yoshida, *Nature Communications* **2017**, 15862. (A block copolymer solution that undergoes autonomous and periodic sol-gel transition under constant conditions, demonstrating strong potential to realize a type of bioinspired autonomous soft robots.)

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