



Rustem F. Ismagilov

Date of birth: June 14, 1973 **Nationality**: Russian

Position: Professor of Chemistry, University of Chicago (USA)

Education: 1990–1994 Higher Chemical College of Russian Academy of Sciences, Moscow

1994-1998 PhD under the supervision of Stephen F. Nelsen, "Adiabatic Electron Transfer

Theory and Experiment", University of Wisconsin (USA)

1998–2001 Postdoctoral position under the supervision of George M Whitesides, Harvard

University (USA)

Professional American Chemical Society, American Institute of Chemical Engineers, Materials Research

associations: Society, and Biophysical Society

Awards: 2008 American Chemical Society Award in Pure Chemistry; 2007 Pioneer Award from the

National Institutes of Health; 2005 Camille Dreyfus Teacher-Scholar Award; 2004 Cottrell Scholar; 2004 NSF CAREER Award; 2003 DuPont Young Professor; 2003 Beckman Young

Investigator; 2002 Searle Scholar Award; 1998 Celanese Excellence Award

Current research Use of microfluidics to understand the dynamics of complex chemical and biological reaction

terests: networks in space and time, and the development and validation of microfluidic technologies

Hobbies: Current hobbies: my children, Max and Daniel

Former hobbies: scuba diving and hiking



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Me, myself, and I

When I wake up I...read until our boys wake up, then negotiate the daily plan with Max, who is a little over two, and refine this plan with Daniel, who is a little over zero.

My first experiment was...a meticulous comparison of melting transitions of lead-tin alloys used in fishing weights; I was seven and still have the burn mark.

In my spare time I...walk on the moon; this is as true as any statement about an empty set in mathematical logic—and must be the nerdiest statement this journal has ever published.

The worst advice I have ever been given was...work on what you know.

The part of my job which I enjoy the most is...thinking.

If I could be a piece of lab equipment, I would be...a waste container for sharps; everyone treats you with respect, and gives you butterflies-in-the-stomach tingles all day long.

My favourite food is...Japanese (my colleague Hisashi Yamamoto must have had something to do with this, directly or indirectly).

My favourite piece of music is...Jim Hall Concerto.

My worst habit is...over thinking.

My five top papers:

- "A Microfluidic System for Controlling Reaction Networks in Time": H. Song, J. D. Tice, R. F. Ismagilov, Angew. Chem. 2003, 115, 792–796; Angew. Chem. Int. Ed. 2003 42, 768–772.
- "Minimal Functional Model of Hemostasis in a Biomimetic Microfluidic System": M. K. Runyon, B. L. Johnson-Kerner, R. F. Ismagilov, Angew. Chem. 2004, 116, 1557–1562; Angew. Chem. Int. Ed. 2004, 43, 1531–1536.
- "Defined Spatial Structure Stabilizes a Synthetic Multispecies Bacterial Community": H. J. Kim, J. Q. Boedicker, J. W. Choi, R. F. Ismagilov, Proc. Natl. Acad. Sci. 2008, 105, 18188–18193.
- "Spatial Localization of Bacteria Controls Initiation of Blood Coagulation by 'Quorum Acting'": C. J. Kastrup, J. Q. Boedicker, A. P. Pomerantsev, M. Moayeri, Y. Bian, R. R. Pompano, T. R. Kline, P. Sylvestre, F. Shen, S. H. Leppla, W.-J. Tang, R. F. Ismagilov, *Nature Chem. Biol.* 2008, 4, 742–750.
- "The Chemistrode: A Droplet-Based Microfluidic Device for Stimulation and Recording with High Temporal, Spatial, and Chemical Resolution": D. Chen, W. Du, Y. Liu, W. Liu, A. Kuznetsov, F. E. Mendez, L. H. Philipson, R. F. Ismagilov, *Proc. Natl. Acad. Sci.* 2008, 105, 16843–16848.

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The author presented on this page has recently published his **10th article** since 2000 in Angewandte Chemie:

C. J. Kastrup, F. Shen, R. F. Ismagilov, Angew. Chem. 2007, 119, 3734– 3736; Angew. Chem. Int. Ed. 2007, 46, 3660–3662. ...and has featured on the cover of Angewandte Chemie:

B. Zheng, J. D. Tice, L. S. Roach, R. F. Ismagilov, Angew. Chem. 2004, 116, 2562–2565; Angew. Chem. Int. Ed. 2004, 43, 2508–2511 (see figure above).