

Curriculum Vitae

Name: Tsunehisa KIMURA

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Education:

1975/3 Bachelor of Engineering, Kyoto University

1977/3 Master of Engineering, Graduate School of Engineering, Kyoto University

1980/3 Graduate from PhD course at Graduate School of Engineering, Kyoto University

1981/3 Doctor of Engineering, Kyoto University

Scientific career:

1982/4-1990/3 Researcher at Asahi Chemical Industry

1990/4-1993/12 Postdoctoral fellow with Prof. D. G. Gray at McGill University, Canada

1994/1-2002/12 Associate professor at Tokyo Metropolitan University

2003/1-2007/3 Professor at Tokyo Metropolitan University

2007/4- present Professor at Kyoto University

2011/1-2012/12 President of the Magneto Science Society of Japan

Awards:

2002/5 The Award of the Society of Polymer Science, Japan (2001)

2010/7 The Award of the Cellulose Society of Japan (2009)

Publications (latest 5 years):

- (1) G. Song, R. Kusumi, F. Kimura, T. Kimura, K. Deguchi, S. Ohki, T. Fujito, and T. Shimizu, Single-crystal NMR approach for determining chemical shift tensors from powder samples via magnetically oriented microcrystal arrays. *J. Magn. Reson.*, 255, 28-33 (2015).
- (2) R. Kusumi, F. Kimura, and T. Kimura, Determination of ³¹P Chemical Shift Tensor from Microcrystalline Powder by Using a Magnetically Oriented Microcrystal Array. *Cryst. Growth Des.*, 15, 718-722 (2015).
- (3) M. Tatsumi, F. Kimura, T. Kimura, Y. Teramoto, and Y. Nishio. Anisotropic Polymer Composites Synthesized by Immobilizing Cellulose Nanocrystal Suspensions Specifically Oriented under Magnetic Fields. *Biomacromolecules*, 15, 4579-4589 (2014).

- (4) Y. Mizukawa, Y. Ikemoto, T. Moriwaki, T. Kinoshita, F. Kimura, T. Kimura, and M. Iwasaka. Synchrotron Microscopic Fourier Transform Infrared Spectroscopy Analyses of Biogenic Guanine Crystals Along Axes of Easy Magnetization. *IEEE Transactions on Magnetics*, 50, 5001804 (2014).
- (5) K. Matsumoto, F. Kimura, G. Song, S. Yamane, H. Kikuchi, T. Tanaka, S. Higuchi, N. Kitamura, and T. Kimura. Crystal System Determination from X-ray Diffraction of Magnetically Oriented Microcrystal Suspensions. *Cryst. Growth Des.*, 14, 6486-6491 (2014).
- (6) M. Mashkour, M. Tajvidi, F. Kimura, H. Yousefi, and T. Kimura. Strong Highly Anisotropic Magnetocellulose Nanocomposite Films Made by Chemical Peeling and In Situ Welding at the Interface Using an Ionic Liquid. *ACS Appl. Mater. Interfaces*, 6, 8165-8172 (2014).
- (7) K. Matsumoto, K. Fujita, T. Tanaka, F. Kimura, and T. Kimura. Determination of anisotropic magnetic susceptibility of a biaxial crystal via orientational fluctuation of its microcrystalline suspension under magnetic field. *Jpn. J. Appl. Phys.*, 53, 055501 (2014).
- (8) M. Mashkour, T. Kimura, F. Kimura, M. Mashkour, and M. Tajvidi. One-dimensional core-shell cellulose-akaganeite hybrid nanocrystals: synthesis, characterization, and magnetic field induced self-assembly. *RSC Adv.*, 4, 52542-52549 (2014).
- (9) M. O. Ishitsuka, H. Nikawa, N. Mizorogi, F. Kimura, T. Kimura, T. Kato, S. Nagase, T. Akasaka. Magnetic Alignments of Endohedral Metallofullerene Nanorods under Magnetic Fields. *Fullerenes, Nanotubes, Carbon Nanostruct.*, 23, 35-39 (2014).
- (10) F. Kimura, W. Oshima, H. Matsumoto, H. Uekusa, K. Aburaya, M. Maeyama, and T. Kimura. Single crystal structure analysis via magnetically oriented microcrystal arrays. *CrystEngComm*, 16, 6630-6634 (2014).
- (11) M. Mashkour, T. Kimura, F. Kimura, M. Mashkour, and M. Tajvidi. Tunable Self-Assembly of Cellulose Nanowhiskers and Polyvinyl Alcohol Chains Induced by Surface Tension Torque. *Biomacromolecules*, 15, 60-65 (2014).
- (12) G. Song, F. Kimura, T. Kimura, and G. Piao. Orientational Distribution of Cellulose Nanocrystals in a Cellulose Whisker As Studied by Diamagnetic Anisotropy. *Macromolecules*, 46, 8957-8963 (2013).
- (13) H. Koshima, M. Matsudomi, Y. Uemura, F. Kimura, and T. Kimura. Light-driven Bending of Polymer Films in Which Salicylidene-phenylethylamine Crystals are Aligned Magnetically. *Chem. Lett.*, 42, 1517-1519 (2013).
- (14) H. Shigemitsu, I. Hisaki, E. Kometani, D. Yasumiya, Y. Sakamoto, K. Osaka, T. S. Thakur, A. Saeki, S. Seki, F. Kimura, T. Kimura, N. Tohnai, and M. Miyata. Highly Crystalline Supramolecular Nanofibers Based on Dehydrobenzoannulene Derivatives. *Chem. Eur. J.*, 19, 15366-15377 (2013).

- (15)M. Yamaguchi, I. Yamamoto, and T. Kimura. Optimum Conditions of Dynamic Fields for the Three-Dimensional Magnetic Alignment of Magnetically Biaxial Particles. *Jpn. J. Appl. Phys.*, 52, 098003 (2013).
- (16)T. Kimura, T. Tanaka, G. Song, K. Matsumoto, K. Fujita, and F. Kimura. Orientation Fluctuation of Microcrystals under Three-Dimensionally Constraining Dynamic Magnetic Fields. *Cryst. Growth Des.*, 13, 1815-1819 (2013).
- (17)M. Yamaguchi, S. Ozawa, I. Yamamoto, and T. Kimura. Characterization of Three-Dimensional Magnetic Alignment for Magnetically Biaxial Particles. *Jpn. J. Appl. Phys.*, 52, 013003 (2013).
- (18)R. Kusumi, F. Kimura, G. Song, and T. Kimura. Chemical shift tensor determination using magnetically oriented microcrystal array (MOMA): ¹³C solid-state CP NMR without MAS. *J. Magn. Reson.*, 223, 68-72 (2012).
- (19)G. Song, K. Matsumoto, K. Fujita, F. Kimura, and T. Kimura. Determination of Ratio of Diamagnetic Anisotropy of a Biaxial Crystal by X-ray Diffraction Measurement. *Jpn. J. Appl. Phys.*, 51, 060203 (2012).
- (20)T. Kimura, Y. Umehara, and F. Kimura. Magnetic field responsive silicone elastomer loaded with short steel wires having orientation distribution. *Soft Matter*, 8, 6206-6209 (2012).
- (21)S. Tsukui and T. Kimura. Magnetic Alignment of Magnetically Biaxial Diamagnetic Rods Under Rotating Magnetic Fields. *Jpn. J. Appl. Phys.*, 51, 057301 (2012).
- (22)T. Kimura, G. Song, K. Matsumoto, K. Fujita, and F. Kimura. Determination of Anisotropic Diamagnetic Susceptibility Using X-ray Diffraction. *Jpn. J. Appl. Phys.*, 51, 040202 (2012).
- (23)M. Mashkour, M. Tajvidi, T. Kimura, F. Kimura, and G. Ebrahimi. Fabricating unidirectional magnetic papers using permanent magnets to align magnetic nanoparticle covered natural cellulose fibers. *BioResources*, 6, 4731-4738 (2011).
- (24)K. Matsumoto, F. Kimura, S. Tsukui, and T. Kimura. X-ray Diffraction of a Magnetically Oriented Microcrystal Suspension of L-Alanine. *Cryst. Growth Des.*, 11, 945-948 (2011).
- (25)F. Kimura, K. Mizutani, B. Mikami, and T. Kimura. Single-Crystal X-ray Diffraction Study of a Magnetically Oriented Microcrystal Array of Lysozyme. *Cryst. Growth Des.*, 11, 12-15 (2011).

Book chapters

- (1) T. Kimura. Magnetically Oriented Microcrystal Arrays and Suspensions: Application to Diffraction Methods and Solid-State NMR Spectroscopy. “ “Advances in Organic Crystal Chemistry” Eds, Rui Tamura and Mikiji Miyata, Springer (2015), Chap.9 (pp.167-186).
- (2) T. Kimura, F. Kimura, K. Matsumoto, and N. Metoki. Three-Dimensional Magnetically-Oriented Microcrystal Array: A Large Sample for Neutron Diffraction

Analysis. “Neutron diffraction” Ed, Irisali Khidirov, InTech, (2012), Chap. 9 (pp.179-202).

(3) G. Piao, F. Kimura, and T. Kimura. Magnetic Alignment of Fullerene Nonowiskers. Pan Stanford Publishing, (2011), Chap. 10 (pp.137-146).