

**CURRICULUM VITAE - TOMOYUKI MORITA**

(as of December 7th, 2010)

name: Tomoyuki Morita

position: Lecturer

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Department of Material Chemistry, Graduated School of Engineering, Kyoto University

Kyoto-Daigaku-Katsura, Nishikyo-ku, Kyoto 615-8510, Japan

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**EDUCATION:**

1995 B.S., Polymer Chemistry, Kyoto University.

1997 M.S., Material Chemistry, Kyoto University.

2000 Ph.D., Material Chemistry, Kyoto University.

Supervisors: Prof. Shunsaku Kimura, Kyoto University.

Thesis Title: "Photoinduced Electron Transfer in Supramolecular Thin Films Composed of *N*-Ethylcarbazole-Containing Compounds".

**PROFESSIONAL EXPERIENCE:**

2000-2001 Researcher, Institute of Material Science Research, Mitsui Chemicals, Inc.

2001-2010 Assistant Professor, Department of Material Chemistry, Graduate School of Engineering, Kyoto University.

2010- Lecturer, Department of Material Chemistry, Graduate School of Engineering, Kyoto University.

2006-2007 Visiting Researcher, Biodesign Institute, Arizona State University (AZ, USA)

**AWARDS:**

2009 SPJ Award for the Outstanding Paper in Polymer Journal sponsored by ZEON  
*"Enhanced Photocurrent Generation by Electron Hopping through Regularly-Arranged Chromophores in a Helical Peptide Monolayer"*

2010 2010 Best Paper Award of the Journal of Peptide Science  
*"Distance Dependence of Long-Range Electron Transfer through Helical Peptides"*

**RESEARCH INTERESTS:**

Physical chemistry of supramolecules

**PUBLICATIONS IN REFEREED JOURNALS:**

1) Photoenergy Migration and Hole Transfer in a Bilayer Membrane Composed of Amphiphilic Compounds Carrying an N-Ethylcarbazolyl Group

Morita T, Kimura S, Imanishi Y

*J. Phys. Chem. B* **1997**, *101* (23), 4536-4538.

2) Functionality of Polypeptide by Induction of Specific Tertiary Structure

Imanishi Y, Kimura S, Ueda H, Morita T

*J. Macromol. Sci.-Pure Appl. Chem.* **1997**, *A34* (10), 2073-2084.

3) In situ Fluorescence Spectroscopic Studies of Energy Migration and Energy Transfer in the Monolayer of N-Ethylcarbazole-Containing Amphiphile

Morita T, Kimura S, Imanishi Y

*Langmuir* **1998**, *14* (1), 171-175.

4) Donor-Sensitizer-Acceptor Triad System for Photoenergy Migration, Photoenergy Transfer, and Electron Transfer in a Bilayer Membrane

Morita T, Kimura S, Imanishi Y

*J. Am. Chem. Soc.* **1999**, *121* (3), 581-586.

5) Photocurrent Generation under a Large Dipole Moment Formed by Self-Assembled Monolayers of Helical Peptides Having an N-Ethylcarbazolyl Group

Morita T, Kimura S, Kobayashi S, Imanishi Y

*J. Am. Chem. Soc.* **2000**, *122* (12), 2850-2859.

6) Efficient Photoreduction of Cytochrome c in the Presence of a Bilayer Membrane of N-Ethylcarbazole-Containing Amphiphiles

Morita T, Kimura S, Imanishi Y

*Chem. Lett.* **2000**, (5), 488-489.

7) Photocurrent Generation by the Self-Assembled Monolayers Integrating a Photoenergy-Harvesting System and an Electron-Transport System of Helical Peptide

Morita T, Kimura S, Kobayashi S, Imanishi Y

*Chem. Lett.* **2000**, (6), 676-677.

8) Spectroscopic Study on Direction and Inclination of Helical Peptides in Monolayers Formed at the Air/Water Interface and on a Gold Substrate

Morita T, Kimura S, Kobayashi S, Imanishi Y

*Bull. Chem. Soc. Jpn.* **2000**, 73 (7), 1535-1540.

9) Preparation and Functions of Self-Assembled Monolayers of Helix Peptides

Kimura S, Miura Y, Morita T, Kobayashi S, Imanishi Y

*J. Polym. Sci. A-Polym. Chem.* **2000**, 38, 4826-4831.

10) Influence of Subphase on the Orientation of Helical Peptides at Interface

Kitagawa K, Morita T, Umemura J, Kimura S

*Polymer* **2002**, 43 (12), 3533-3540.

Long-range Electron Transfer over 4 nm Governed by an Inelastic Hopping Mechanism in Self-Assembled Monolayers of Helical Peptides

Morita T, Kimura S

*J. Am. Chem. Soc.* **2003**, 125 (29), 8732-8733.

12) Electric Properties of Self-Assembled Monolayers of Helical Peptides by Scanning Tunneling Spectroscopy

Kitagawa K, Morita T, Kawasaki M, Kimura S

*J. Polym. Sci. A-Polym. Chem.* **2003**, 41 (22), 3493-3500.

13) A Molecular Photodiode System that can Switch Photocurrent Direction

Yasutomi S, Morita T, Imanishi Y, Kimura S

*Science* **2004**, 304 (5679), 1944-1947.

14) Spontaneous Assembly Formation of Cyclic Dimer of  $\beta$ -Amino Acid in Water

Fujimura F, Fukuda M, Sugiyama J, Morita T, Kimura S

*Chem. Lett.* **2004**, 33 (7), 810-811.

15) Observation of Single Helical Peptide Molecule Incorporated into Alkanethiol Self-Assembled Monolayer on Gold by Scanning Tunneling Microscopy

Kitagawa K, Morita T, Kimura S

*J. Phys. Chem. B* **2004**, 108 (39), 15090-15095.

16) Efficient Photocurrent Generation by Self-Assembled Monolayers Composed of 3(10)-Helical Peptides Carrying Linearly Spaced Naphthyl Groups at the Side Chains

Yanagisawa K, Morita T, Kimura S

*J. Am. Chem. Soc.* **2004**, *126* (40), 12780-12781.

17) Formation of Gold Nanoparticles in Microreactor Composed of Helical Peptide Assembly in Water

Nishikawa H, Morita T, Sugiyama J, Kimura S

*J. Coll. Interface Sci.* **2004**, *280* (2), 506-510.

18) Cyclic Peptides as Scaffold for Organization of Functional Groups on Surface

Fujii S, Morita T, Umemura J, Kimura S

*Trans. MRS-J.* **2004**, *29* (1), 67-70.

19) Formation and Electronic Properties of Two-Dimensional PbS Nanostructure Composed of an  $\alpha$ -Helical Peptide/Crown Ether Conjugate

Morino N, Kitagawa K, Morita T, Kimura S

*Thin Solid Films* **2005**, *479* (1-2), 261-268.

20) Molecular Rectification of a Helical Peptide with a Redox Group in the Metal-Molecule-Metal Junction

Kitagawa K, Morita T, Kimura S

*J. Phys. Chem. B* **2005**, *109* (29), 13906-13911.

21) Effects of Dipole Moment, Linkers, and Chromophores at Side Chains on Long-Range Electron Transfer through Helical Peptides

Watanabe J, Morita T, Kimura S

*J. Phys. Chem. B* **2005**, *109* (30), 14416-14425.

22) Photoresponsive Change of the Surface Potential Generated by Helical Peptide Self-Assembled Monolayers

Tada Y, Morita T, Umemura J, Iwamoto M, Kimura S

*Polym. J.* **2005**, *37* (8), 599-607.

23) A Helical Molecule that Exhibits Two Lengths in Response to an Applied Potential

Kitagawa K, Morita T, Kimura S

*Angew. Chem. Int. Ed.* **2005**, *44* (39), 6330-6333.

24) pH-Controlled Switching of Photocurrent Direction by Self-Assembled Monolayer of Helical Peptides

Yasutomi S, Morita T, Kimura S

*J. Am. Chem. Soc.* **2005**, *127* (42), 14564-14565.

25) Electron Transfer in Metal-Molecule-Metal Junction Composed of Self-Assembled Monolayers of Helical

Peptides Carrying Redox-Active Ferrocene Units

Kitagawa K, Morita T, Kimura S

*Langmuir* **2005**, *21* (23), 10624-10631.

26) Vectorial Electron Transport at a Long Distance by Helical Peptides

Morita T, Kitagawa K, Kimura S

*Trans. MRS-J.* **2005**, *30* (3), 731-733.

27) Cyclic Peptides as Scaffold for Oriented Functional Groups on Surface

Fujii S, Morita T, Umemura J, Kimura S

*Thin Solid Films* **2006**, *503* (1-2), 224-229.

28) Fully Hydrophobic Artificial Protein but Water Dispersible due to Large Dipole

Fukuda M, Sugiyama J, Morita T, Kimura S

*Polym. J.* **2006**, *38* (4), 381-386.

29) Parallel Assembly of Dipolar Columns Composed of a Stacked Cyclic tri- $\beta$ -Peptide

Fujimura F, Fukuda M, Sugiyama J, Morita T, Kimura S

*Org. Biomol. Chem.* **2006**, *4* (10), 1896-1901.

30) Electron Transport Properties of Helical Peptide Dithiol at a Molecular Level: Scanning Tunneling Microscope Study

Kitagawa K, Morita T, Kimura S

*Thin Solid Films* **2006**, *509* (1-2), 18-26.

31) Helix Triangle: Unique Peptide-based Molecular Architecture

Yoshida K, Kawamura S, Morita T, Kimura S

*J. Am. Chem. Soc.* **2006**, *128* (24), 8034-8041.

32) Columnar Assembly of Cyclic  $\beta$ -Amino Acid Functionalized with Pyranose Rings

Fujimura F, Hirata T, Morita T, Kimura S, Horikawa Y, Sugiyama J

*Biomacromolecules* **2006**, *7* (8), 2394-2400.

33) Foldamer for Novel Peptide Derivatives with Pyrene Units Incorporated into the Main Chain

Kawamura S, Morita T, Kimura S

*Sci. Technol. Adv. Mater.* **2006**, *7* (6), 544-551.

34) Double Assembly Composed of Lectin Association with Columnar Molecular Assembly of Cyclic tri- $\beta$ -Peptide Having Sugar Units

Fujimura F, Horikawa Y, Morita T, Sugiyama J, Kimura S

*Biomacromolecules* **2007**, 8 (2), 611-616.

35) Molecular Assembly Formation of Cyclic Hexa- $\beta$ -Peptide Composed of Acetylated Glycosamino Acids

Hirata T, Fujimura F, Horikawa Y, Sugiyama J, Morita T, Kimura S

*Biopolymers* **2007**, 88 (2), 150-156.

36) Determination of Single Molecule Conductances of Alkanedithiols by Conducting-Atomic Force Microscopy with Large Gold Nanoparticles

Morita T, Lindsay S

*J. Am. Chem. Soc.* **2007**, 129 (23), 7262-7263.

37) Vertical and Directional Insertion of Helical Peptide into Lipid Bilayer Membrane

Nakatani K, Morita T, Kimura S

*Langmuir* **2007**, 23 (13), 7170-7177.

38) Unique Helical Triangle Molecular Geometry Induced by Dipole-Dipole Interactions

Ishikawa T, Morita T, Kimura S

*Bull. Chem. Soc. Jpn.* **2007**, 80 (8), 1483-1491.

39) Fabrication of Langmuir-Blodgett Film of a Fullerene Derivative with a Cyclic Peptide as an Anchor

Fujii S, Morita T, Kimura S

*Bioconj. Chem.* **2007**, 18, 1855-1859.

40) Distance Dependence of Long-Range Electron Transfer through Helical Peptides

Kai M, Takeda K, Morita T, Kimura S

*J. Peptide Sci.* **2008**, 14, 192-202.

41) Azobenzene-Helical Peptide Conjugate: Electronic Structure and Photoisomerization in Solution and on Surface

Wakabayashi M, Fujii S, Morita T, Kimura S

*Chem. Lett.* **2008**, 37 (7), 702-703.

42) Photoinduced Electron Transfer in Thin Layers Composed of Fullerene-Cyclic Peptide Conjugate and Pyrene Derivative

Fujii S, Morita T, Kimura S

*Langmuir* **2008**, *24* (10), 5608-5614.

43) Enhanced Photocurrent Generation by Electron Hopping through Regularly-Arranged Chromophores in a Helical Peptide Monolayer

Morita T, Yanagisawa K, Kimura S

*Polym. J.* **2008**, *40* (8), 700-709.

44) Reduction-Induced Switching of Single Molecule Conductance of Fullerene Derivative

Morita T, Lindsay S

*J. Phys. Chem. B* **2008**, *112*, 10563-10572.

45) Effects of Monolayer Structures on Long-Range Electron Transfer in Helical Peptide Monolayer

Takeda K, Morita T, Kimura S

*J. Phys. Chem. B* **2008**, *112*, 12840-12850.

46) Second Harmonic Generation from Langmuir-Blodgett film of Cyclic Peptide Carrying Two Disperse Red 1 on Fused Quartz Surface

Fujii S, Morita T, Kimura S

*J. Peptide Sci.* **2008**, *14*, 1295-1302.

47) Electron Transfer through Self-Assembled Monolayer of Double-Helix Peptide with Linking the Terminals by Ferrocene

Okamoto S, Morita T, Kimura S

*Langmuir* **2009**, *25*, 3297-3304.

48) Linker Effects on Monolayer Formation and Long-Range Electron Transfer in Helical Peptide Monolayers

Arikuma Y, Takeda K, Morita T, Ohmae M, Kimura S

*J. Phys. Chem. B* **2009**, *113*, 6256-6266.

49) Dipole Effects on Molecular and Electronic Structures in a Novel Conjugate of Oligo(phenyleneethynylene) and Helical Peptide

Nakayama H, Morita T, Kimura S

*PCCP* **2009**, *11*, 3967-3976.

50) Photocurrent Generation by Self-Assembled Monolayers of Helical Peptides with Ferrocene Unit as Hopping Site

Okamoto S, Morita T, Kimura S

*Chem. Lett.* **2009**, *38*, 126-127.

51) Long-Range Electron Transfer through Self-Assembled Monolayers Composed of Helical Peptides Carrying Ferrocene Unit at the Terminal

Morita T, Watanabe J, Takeda K, Kai M, Arikuma Y, Okamoto S, Kimura S  
*Koubunshi Ronbunshu* **2009**, *66*, 406-418.

52) Electron Hopping 100 Å Along an  $\alpha$ -Helix

Arikuma Y, Morita T, Nakayama H, Kimura S  
*Angew. Chem. Int. Ed.* **2010**, *49*, 1800-1804.

53) Electric Field Effect of Helical Peptide Dipole in Self-Assembled Monolayers on Electronic Structure of Oligo(Phenyleneethynylene)

Nakayama H, Morita T, Kimura S  
*J. Phys. Chem. C* **2010**, *114*, 4669-4674.

#### BOOK CHAPTERS:

1) "Generation of a strong dipole layer and its function by using helical peptide molecular assemblies", Kimura S, Morita T, Kitagawa K in *Nanotechnology and nano-interface controlled electronic devices* (Eds. Iwamoto M, Kaneto K, Mashiko S) (Elsevier, Amsterdam, 2003), pp 253-267.

2) "Molecular Electronic Properties Leading to Molecular Devices: Including Examples of Helical Peptides", Kimura S, Morita T, in *Bottom-Up Nanofabrication* (Eds. Ariga K and Nalwa, H. S.) (American Scientific Publishers, California, 2007), Vol 6, pp 73-90.

#### OTHER PUBLICATIONS:

1) らせん形成ポリペプチドの溶液中での分子集合体形成  
木村俊作、森田智行、西河博以  
日本化学繊維研究所講演会講演集 **2002**, *59*, 65-70.

2) ヘリックスペプチド単分子の電気的特性  
木村俊作、北川和哉、森田智行、森野寛啓  
日本化学繊維研究所講演会講演集 **2003**, *60*, 27-33.

3) 疎水性 Three-Arm Helix(分子量 5,228)の水への可溶化  
福田誠、杉山淳司、森田智行、木村俊作  
日本化学繊維研究所講演会講演集 **2005**, *62*, 33-38.



4) 印加電圧に応答してヘリックスのタイプを替えるペプチド分子デバイス

北川和哉、森田智行、木村俊作

日本化学繊維研究所講演会講演集 **2006**, 63, 29-34.

5) ヘリックスペプチドトライアングルの合成と分子ダイポール工学

石川孝仁、吉田健太郎、森田智行、木村俊作

日本化学繊維研究所講演会講演集 **2008**, 65, 9-14.

6) 分子ダイポール工学—OPE-ペプチド複合体での分子ダイポールによる $\pi$ 共役系の変調—

中山英典、森田智行、木村俊作

日本化学繊維研究所講演会講演集 **2010**, 67, 7-12.

#### **PRESENTATIONS AT ACADEMIC CONFERENCES:**

1) "Excitation energy and hole transfer in a bilayer membrane composed of *N*-ethylcarbazole-containing amphiphiles", Hiroshima University, the 45th symposium of The Society of Polymer Science, Japan (SPSJ), Oct. 1 (1996).

2) "Excitation energy transfer in a monolayer at the air/water interface composed of *N*-ethylcarbazole-containing amphiphiles", Tokyo Institute of Technology, the 46th SPSJ annual meeting, May 24 (1997).

3) "Photoinduced electron transfer in a monolayer and bilayer membrane composed of *N*-ethylcarbazole-containing amphiphiles", Nagoya Institute of Technology, the 46th SPSJ symposium, Oct. 1 (1997).

4) "Photoreduction of cytochrome *c* by a bilayer membrane composed of *N*-ethylcarbazole-containing amphiphiles", Kyoto International Convention Center, the 47th SPSJ annual meeting, May 27 (1998).

5) "Photocurrent generation by a self-assembled monolayer composed of helical peptides carrying an *N*-ethylcarbazolyl group", Kyoto International Convention Center, the 48th SPSJ annual meeting, May 27 (1999).

6) "Photocurrent Generation by Self-Assembled Monolayers Composed of Helical Peptides Having *N*-Ethylcarbazolyl Group", Kyoto International Convention Center, IUPAC international symposium on ionic polymerization, Jul. 19 (1999).

7) "Photocurrent generation enhanced by dipole moment in a self-assembled monolayer of helical peptides", Niigata University, the 48th SPSJ symposium, Oct. 6 (1999).

- 8) "Efficient photocurrent generation by integrating photoharvesting and electron transport systems", Nagoya International Convention Center, the 49th SPSJ annual meeting, May 29 (2000).
- 9) "Long-range electron transfer by a hopping mechanism in a self-assembled monolayer of helical peptides", Kogakuin University (Tokyo), the 52nd annual meeting of The Japanese Society of Materials Science (JSMS), May 17 (2003).
- 10) "Electron transfer in a self-assembled monolayer from helical peptides carrying a ferrocene moiety", Nagoya International Convention Center, the 52nd SPSJ annual meeting, May 29 (2003).
- 11) "Investigation on long-range electron transfer in helical peptide self-assembled monolayers", Yamaguchi University, the 52nd SPSJ symposium, Sep. 25 (2003).
- 12) "Long-range electron transfer through long-chain helical peptides", Kobe International Convention Center, the 53rd SPSJ annual meeting, May 26 (2004).
- 13) "Control of electron transfer in a molecular level by helical peptides", Technical University of Munich (Germany), Sonderforschungsbereich (special research center) Seminar (SFB 563), Sep. 22 (2004).
- 14) "Nano-molecular systems controlling electron transfer reactions, created by helical peptides", Science Council of Japan, the 48th joint symposium between JSMS and Science Council of Japan, Oct. 20 (2004).
- 15) "Long-range electron transfer through helical peptide monolayers", Advanced Materials Laboratory (Tsukuba), The 12th International Symposium on Advanced Materials, Dec. 9 (2004).
- 16) "Creation of various photocurrent generation systems from helical peptides", Sendai Civic Center, the 54th JSMS annual meeting, May 22 (2005).
- 17) "Efficient photocurrent generation by  $3_{10}$ -helical peptide monolayer containing regularly-arranged multiple chromophores", Fukuoka International Convention Center, The 8th SPSJ International Polymer Conference (IPC2005), Jul. 29 (2005).
- 18) "Unique electron transfer in helical peptide monolayers", Biodesign Institute, Arizona State University (US), Biodesign Institute Seminar Series, Jul. 14 (2006).
- 19) "Unique electronic properties of helical peptide molecules", Engineering Department of Arizona State University (US), Seminar Series of Dr. Nongian Tao's Laboratory, Sept. 29 (2006).

- 20) "Conducting-atomic force microscopy to determine single molecule conductances", Biodesign Institute of Arizona State University (US), Biodesign Association of Postdoc Seminar Series, Apr. 11 (2007).
- 21) "Electron transfer in helical peptide self-assembled monolayer - elucidation of biological electron transfer and application as molecular devices", invited talk, Tokyo University of Science, The 25th workshop of the NanoTech group in the Surface Finishing Society of Japan, Jul. 24 (2008).
- 22) "Enhanced Photocurrent Generation by Regularly-Arranged Chromophores in Helical Peptide Monolayer", Pennsylvania Convention Center, Philadelphia, PA (US), the 236th ACS national meeting, Aug. 21 (2008).
- 23) "Monolayer Structure Effects on Long-Range Electron Transfer in Helical Peptide Monolayers", Osaka City University, the 57th SPSJ symposium, Sep. 26 (2008).
- 24) "Electron Transfer in Helical Peptide Self-Assembled Monolayers", University of Japan, the 89th annual meeting of the Chemical Society of Japan, Mar. 27th (2009).
- 25) "Investigation on Factors Controlling Long-Range Electron Transfer in Helical Peptide Self-Assembled Monolayers", Walter E. Washington Convention Center, Washington DC (US), the 238th ACS national meeting, Aug. 19 (2009).
- 26) Award lecture on "Enhanced Photocurrent Generation by Electron Hopping through Regularly-Arranged Chromophores in a Helical Peptide Monolayer", Kumamoto University, the 58th SPSJ symposium, Sep. 18 (2009).
- 27) "Detailed Study of Long-Range Electron Transfer in Helical Peptide Monolayers", Nagoya International Convention Center, 1st FAPS (Federation of Asian Polymer Societies) Polymer Congress, Oct. 21st (2009).
- 28) "Electron Transfer in Helical Peptide Self-Assembled Monolayers", Kyoto University, KIPS (Kyoto Institute of Polymer Science) Symposium, Dec. 11th (2009).
- 29) "An Electron Hops along  $\alpha$ -Helix over 100 Å", Boston Convention & Exhibition Center, Boston (US), the 240th ACS national meeting, Aug. 22 (2010).

**FUNDINGS:**

- 1) 2002年4月～2004年3月(平成14～15年度) 日本学術振興会科学研究費補助金 若手研究(B)「ヘリックスペプチドを用いた膜透過電子移動システムの構築」(14750694) 340万円 (*J. Am. Chem. Soc.* **2004**, *126* (40), 12780-12781, 2004、*Science* **2004**, *304* (5679), 1944-1947)
  
- 2) 2002年11月～2004年11月 泉科学技術振興財団研究助成金「ヘリックスペプチド自己組織化膜による光電流スイッチングシステムの構築」100万円 (*Science* **2004**, *304* (5679), 1944-1947)
  
- 3) 2003年9月～2004年9月 村田学術振興財団研究助成金「環状ペプチドを用いた新規オプトエレクトロニクス材料の開発」160万円 (*Thin Solid Films* **2006**, *503* (1-2), 224-229)
  
- 4) 2004年4月～2005年3月 池谷科学技術振興財団研究助成金「ヘリックスペプチド配位子と金属原子を用いた超分子電子ナノワイヤーの創成」100万円 (*Polym. J.* **2006**, *38* (4), 381-386)
  
- 5) 2004年4月～2006年3月(平成16～17年度) 日本学術振興会科学研究費補助金 若手研究(B)「長距離電子移動を可能とするヘリックスペプチドシステムの創成」(16750098) 370万円 (*J. Am. Chem. Soc.* **2005**, *127* (42), 14564-14565、*J. Phys. Chem. B* **2005**, *109* (30), 14416-14425、*Sci. Technol. Adv. Mater.* **2006**, *7* (6), 544-551、*Langmuir* **2007**, *23* (13), 7170-7177、*J. Peptide Sci.* **2008**, *14*, 192-202、*Langmuir* **2008**, *24* (10), 5608-5614、*Polym. J.* **2008**, *40* (8), 700-709、*J. Phys. Chem. B* **2008**, *112*, 12840-12850、*J. Phys. Chem. B* **2009**, *113*, 6256-6266、*Angew. Chem. Int. Ed.* **2010**, *49*, 1800-1804、*Langmuir* **2009**, *25*, 3297-3304、*Chem. Lett.* **2009**, *38*, 126-127、*Koubunshi Ronbunshu* **2009**, *66*, 406-418)
  
- 6) 2006年7月～2007年7月 村田海外留学奨学会助成金「走査型プローブ顕微鏡による単独分子電気特性の解析」240万円 (*J. Am. Chem. Soc.* *129*, 7262, 2007、*J. Phys. Chem. B* **2008**, *112*, 10563-10572)
  
- 7) 2008年4月～2010年3月(平成20～22年度) 日本学術振興会科学研究費補助金 若手研究(A)「光エネルギー捕集と電子移動を合わせて効率化する発色基配列化ペプチドの創成」(20685009) 1790万円 (*J. Phys. Chem. B* **2008**, *112*, 12840-12850、*J. Phys. Chem. B* **2009**, *113*, 6256-6266、*Angew. Chem. Int. Ed.* **2010**, *49*, 1800-1804、*Langmuir* **2009**, *25*, 3297-3304、*Chem. Lett.* **2009**, *38*, 126-127、*Koubunshi Ronbunshu* **2009**, *66*, 406-418)
  
- 8) 2010年4月～2012年3月(平成22～23年度) 日本学術振興会科学研究費補助金 挑戦的萌芽研究「外部磁場により変調できるヘリックスペプチドキャパシタの創成」(22655032) approx. 500万円

**HOBBIES:**

reading (novel and manga only), modern art, music, movies, fishing, and drive

**5 Favorite story writers:**

Keigo Higashino (1958-)

Takeru Kaido (1961-)

Osamu Dazai (1909-1948)

Kiyoshi Shigematsu (1963-)

Shusuke Shizukui (1968-)

**5 Favorite manga artists:**

Taiyo Matsumoto (1967-)

Katsuhiro Otomo (1954-)

Takehiko Inoue (1967-)

Mineo Maya (1953-)

Naoki Urasawa (1960-)

**5 Favorite painters:**

Marc Chagall (1887-1985)

Shoen Uemura (1875-1949)

Pablo Picasso (1881-1973)

Gustav Klimt (1862-1918)

Salvador Dalí (1904-1989)

**5 Favorite musicians:**

Ryuichi Sakamoto (1952-)

Ringo Sheana (1978-)

Keisuke Kuwata (1956-)

Kazutoshi Sakurai (1970-)

Peter Gabriel (1950-)

**5 Favorite movies:**

Last Emperor (1987)

Aile de Honneamise - Royal Space Force (animation, 1987)

Ghost in the Shell (animation, 1995)

Se7en (1995)

The Shawshank Redemption (1994)