



[Electrical Engineering](#) > IKARI Tomonori



**IKARI Tomonori**

Organization	Electrical Engineering
Position	Associate Professor
Academic Title	Doctor(Engineering)
Research Fields	Surface Science, Thin Film, Electronic structure

## << Research Subjects >>

1. [The observation of electronic structures at Si/6H-SiC\(0001\) reconstructed surfaces.](#)
2. [The observation of density of states and surface structures at CuPc thin film.](#)
3. [The influence of ion beam for the growth of carbon nanotubes by SiC surface decomposition.](#)

## << Academic Activities >>

### Papers and Notes

1. [S. Krischok, A. Ulbrich, T. Ikari, V. Kempter, M. Marschewski, O. Höfft: "Surface structure of \[XMI\]m Tf2N ultrathin Ionic Liquid films probed by metastable He atoms and photoelectron spectroscopies \(UPS AND XPS\)", NIMB Proceedings \(In Press\)](#)
2. [M. Okano, D. Edamoto, K. Uchida, I. Omura, T. Ikari, M. Nakao, M. Naitoh: "Ion-beam irradiation effect in the growth process of graphene on silicon carbide-on-insulator substrates", Materials Science Forum, Vol. 778-780, pp. 1170-1173 \(2014\)](#)
3. [M. Onoue, H. Okado, T. Ikari, M. Naitoh, T. Nagai, F. Shoji: "Fine structure analysis of spherical carbon particles produced in a methane plasma", Diamond & Related Materials, Vol. 27-28, pp. 10-13 \(2012\)](#)
4. [M. Naitoh, Y. Karayama, H. Ohaze and T. Ikari: "Ion-Beam Irradiation Effect on the Growth of Carbon Nanotubes in the SiC Surface Decomposition Method", Japanese Journal of Applied Physics, Vol. 51, pp. 010201 \(2012\)](#)
5. [M. Naitoh, M. Okano, Y. Kitada, Y. Sasaki, Y. Okubo, D. Edamoto, M. Nakao, I. Omura, T. Ikari: "STM observation of graphene formation using SiC-on-insulator substrates", Surface Review and Letters, Vol. 18, No. 5, pp. 163-167 \(2011\)](#)
6. [M. Reinmöller, A. Ulbrich, T. Ikari, J. Preiß, O. Höfft, F. Endres, S. Krischok and W. J. D. Beenken: "Theoretical Reconstruction and Elementwise Analysis of Photoelectron Spectra for Imidazolium-Based Ionic Liquids", Physical Chemistry Chemical Physics, Vol. 13, pp. 19526 \(2011\)](#)
7. [A. Keppler, M. Himmerlich, T. Ikari, M. Marschewski, E. Pachomow, O. Höfft, W. Maus-Friedrichs, F. Endres and S. Krischok: "Changes of the near-surface chemical composition of the \[EMI\]m Tf2N room temperature ionic liquid under the influence of irradiation", Physical Chemistry Chemical Physics, Vol. 13, pp. 1174-1181 \(2011\)](#)
8. [T. Ikari, A. Keppler, M. Reinmöller, W.J.D. Beenken, S. Krischok, M. Marschewski, W. Maus-Friedrichs, O. Höfft, F. Endres: "Surface electronic structure of imidazolium-based ionic liquids studied by electron spectroscopy", e-Journal of Surface Science and Nanotechnology, Vol. 8, pp. 241-245 \(2010\)](#)
9. [T. Ikari, S. Tanaka, S. Nakamura, M. Naitoh, S. Nishigaki, F. Shoji: "Adsorption of cobalt phthalocyanine on a Si\(100\) surface with Bi-line structures as evaluated by scanning tunneling microscopy", Applied Surface Science, Vol. 256, pp. 1132-1135 \(2009\)](#)
10. [T. Ikari, H. Koga, K. Kojima, I. Uemura, H. Miyazaki, M. Naitoh, S. Nishigaki: "Influence of a Cr layer on the glass substrate on the growth of carbon nanotubes by chemical vapor deposition", Surface Review and Letters, Vol. 16, No. 5, pp. 761-765 \(2009\)](#)
11. [S. Nakamura, S. Kashirajima, Y. Johdai, Y. Yoshiwa, M. Naitoh, S. Nishigaki, Y. Shimizu, T. Ikari, F. Shoji: "An STM Observation of Adsorption of CuPc on the Si\(100\) Surface with Bi-line Structures", Surface Review and Letters, Vol. 14, Issue 05, pp. 957-961 \(2007\)](#)
12. [T. Ikari, T. Matsuoka, K. Murakami, T. Kawamoto, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Hydrogen-assisted reduction of the Ni\(110\)\(3x1\)-O surface studied by metastable-induced electron spectroscopy", Surface Science, Vol. 601, Issue 18, 15, pp. 4418-4422 \(2007\)](#)
13. [Y. Shirouzu, Y. Kaya, T. Okazaki, A. Watanabe, M. Naitoh, S. Nishigaki, T. Ikari and K. Yamada: "Adsorption and Reaction of Calcium at the Si\(111\) Surface Studied by Metastable-Induced Electron Spectroscopy", e-Journal of Surface Science and](#)

- Nanotechnology, Vol. 5, No. 0, pp. 89-93 (2007)
14. T. Ikari, S. Arikado, K. Kameishi, H. Kawahara, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Oxidation of a cesium-covered Ni (110) surface studied by metastable-induced electron spectroscopy", *Applied Surface Science*, Vol. 252, Issue 15, pp. 5424-5427 (2006)
  15. T. Ikari, K. Kameishi, S. Arikado, H. Kawahara, T. Matsuoka, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Surface-structure dependent reaction of hydrogen-assisted reduction at O/Ni(110) surfaces studied by MIES and LEED", *e-Journal of Surface Science and Nanotechnology*, Vol. 4, pp. 1-4 (2006)
  16. T. Ikari, N. Uchino, S. Nishioka, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Influences of the incident He\* velocity on metastable de-excitation processes at a Cs-covered Si(100) surface", *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, Vol. 232, Issues 1-4, pp. 88-93 (2005)
  17. T. Ikari, T. Kojima, K. Yamada, M. Naitoh and S. Nishigaki: "A metastable-induced electron spectroscopy study on the process of oxygen adsorption at a Ni(110) surface", *Applied Surface Science*, Vol. 212-213, pp. 579-582 (2003)
  18. K. Yamada, T. Sugiman, I. Yokoh, T. Ikari, M. Naitoh and S. Nishigaki: "Sodium-assisted nitrogen adsorption on Si(001) surfaces at room temperature studied by metastable de-excitation spectroscopy", *Surface Science*, Vol. 507-510, pp. 207-212 (2002)
  19. S. Nishigaki, T. Sugiman, T. Ikari, I. Yokoh, K. Yamada and M. Naitoh: "A metastable-induced electron spectroscopy study on the promotion of nitridation by oxygen/alkali pre-adsorbates at Si(100) surfaces", *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, Vol. 193, Issues 1-4, pp. 460-465 (2002)
  20. K. Tachibana, T. Ikari, M. Naitoh and S. Nishigaki: "Growth of iron-silicide thin layers on clean and hydrogen-terminated Si(100) surfaces studied by AES and LEED", *Proc. 5th Russia-Japan Seminar on Semiconductor Surfaces* (2002)

## Presentations

1. S. Krischok, A. Ulbrich, T. Ikari, V. Kempter, M. Marschewski, O. Höfft: "Interaction of Metastable He Atoms with Ionic Liquids", 20th International Workshop on Inelastic Ion-Surface Collisions, South Australia, Feb. 16-21 (2014)
2. K. Muraoka, Y. Kumai, Y. Suehiro, A. Morioka, M. Naitoh, T. Ikari: "Observation of the electronic structure of Si/6H-SiC(0001) reconstruction surfaces by metastable atom induced electron spectroscopy", *The International Conference on Silicon Carbide and Related Materials 2013*, Miyazaki, Sept. 29-Oct. 4 (2013)
3. M. Okano, D. Edamoto, K. Uchida, I. Omura, T. Ikari, M. Nakao, M. Naitoh: "Ion-beam irradiation effect in the growth process of graphene using SiC-on-insulator substrates", *The International Conference on Silicon Carbide and Related Materials 2013*, Miyazaki, Sept. 29-Oct. 4 (2013)
4. K. Seo, H. Takedo, M. Naitoh, T. Ikari: "Growth control of carbon nanotubes using ion-beam irradiation in the SiC surface decomposition method", *The International Conference on Silicon Carbide and Related Materials 2013*, Miyazaki, Sept. 29-Oct. 4 (2013)
5. M. Onoue, H. Okado, T. Ikari, M. Naitoh, T. Nagai, F. Shoji: "Fine structure analysis of spherical carbon particles produced in a methane plasma", *Diamond 2011 22nd European Conference on Diamond*, Garmisch-Partenkirchen(Germany), Sep. 4-8 (2011)
6. A. Watanabe, T. Ikari, K. Yamada, S. Nishigaki: "Field emission properties of polycrystalline diamond films deposited on p-type and n-type silicon substrates", *Diamond 2011 22nd European Conference on Diamond*, Garmisch-Partenkirchen(Germany), Sep. 4-8 (2011)
7. O. Höfft, M. Marschewski, E. Pachomow, T. Ikari, W. Maus-Friedrichs, M. Reinmöller, W.J.D. Beenken, A. Keppler, S. Krischok, F. Endres: "Investigations of growth of thin ionic liquid films on Au(111)/Mica", *27th European Conference on Surface Science*, Groningen(Netherlands), Aug. 29-Sep. 3 (2010)
8. Angela Keppler, Tomonori Ikari, Oliver Höfft, Markus Reinmöller, Wichard J. D. Beenken, Frank Endres, and Stefan Krischok: "Changes of the surface electronic structure of [EMIm]Tf2N room temperature ionic liquid induced by copper ions", *DPG Spring Meeting, Regensburg(Germany)*, Mar. 21-26 (2010)
9. Marcel Marschewski, Tomonori Ikari, Angela Keppler, Oliver Höfft, Markus Reinmöller, Wichard J. D. Beenken, Wolfgang Maus-Friedrichs, Stefan Krischok, and Frank Endres: "Surface electronic structure of imidazolium-based ionic liquid films on Au(111)/Mica", *DPG Spring Meeting, Regensburg(Germany)*, Mar. 21-26 (2010)
10. A. Keppler, T. Ikari, O. Höfft, M. Reinmöller, W.J.D. Beenken, F. Endres, S. Krischok: "Influence of Copper on the Surface Electronic Structure of [EMIm]Tf2N", *EUCHEM Conference on Molten Salts and Ionic Liquids 2010*, Bamberg(Germany), Mar. 14-19 (2010)
11. A. Keppler, T. Ikari, M. Marschewski, O. Höfft, M. Reinmöller, W.J.D. Beenken, T. Cremer, C. Kolbeck, F. Maier, F. Endres, H.-P. Steinrück, S. Krischok: "Surface Electronic Valence Band Structure of Imidazolium Based Ionic Liquids", *EUCHEM Conference on Molten Salts and Ionic Liquids 2010*, Bamberg(Germany), Mar. 14-19 (2010)
12. O. Höfft, M. Brettholle, N. Kulbe, A. Keppler, T. Ikari, S. Krischok and F. Endres: "Plasma Electrochemistry in Ionic Liquids" *International Bunsen Discussion Meeting, Leipzig(Germany)*, Sep. 27-30 (2009)
13. Tomonori Ikari, Angela Keppler, Oliver Höfft, Markus Reinmöller, Wichard J. D. Beenken, Frank Endres, Stefan Krischok: "Surface electronic structure of imidazolium-based ionic liquids studied by electron spectroscopy", *10th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures*, Granada(Spain), Sep. 21-25 (2009)
14. Stefan Krischok, Wichard J.D. Beenken, Frank Endres, Oliver Höfft, Tomonori Ikari, Angela Keppler, Markus Reinmölle: "Influence of copper on the surface electronic structure of [EMIm] Tf2N", *3rd Congress on Ionic Liquids (Coil-3)*, Cairns(Australia), May 31-June 4 (2009)
15. K. Nagamatsu, Y. Karayama, T. Yamauchi, T. Ikari, M. Naitoh, S. Nishigaki, H. Okado, F. Shoji: "Influence of the Oxygen on the Growth of Carbon Nanotubes by the SiC Surface Decomposition Method", *4th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-4)*, Matsue (Japan), Oct. 28-31 (2008)
16. H. Koga, K. Kojima, A. Nomura, T. Ikari, M. Naitoh, S. Nishigaki: "Influence of Thickness of the Buffer Layer on the Growth of the Carbon Nanotubes by Chemical Vapor Deposition Method", *4th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-4)*, Matsue (Japan), Oct. 28-31 (2008)
17. S. Katsuki, Y. Yokoyama, T. Ikari, A. Watanabe, M. Naitoh, S. Nishigaki: "Hydrogen-Assisted Reduction of Oxidized Ni (110) Surfaces Studied by Metastable-Induced Electron Spectroscopy", *4th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-4)*, Matsue (Japan), Oct. 28-31 (2008)
18. K. Kojima, M. Nakano, T. Ikari, M. Naitoh, S. Nishigaki, F. Shoji: "Growth Control of Carbon Nanotubes on Silicon Carbide Surface by Surface Decomposition Method", *4th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-4)*, Matsue (Japan), Oct. 28-31 (2008)
19. T. Shimizu, Y. Kitada, T. Ikari, M. Naitoh, S. Nishigaki, F. Shoji: "An STM observation of Adsorption of Cobalt phthalocyanine

- on the 6H-SiC(0001) surfaces", 4th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-4), Matsue (Japan), Oct. 28-31 (2008)
20. S. Tanaka, S. Nakamura, T. Iga, R. Sato, T. Ikari, M. Naitoh, S. Nishigaki, F. Shoji: "A Study of Adsorption of Cobalt Phthalocyanine on the Si(100) Surface with Bi-Line Structures by Scanning Tunneling Microscopy", 4th Vacuum and Surface Sciences Conference of Asia and Australia (VASSCAA-4), Matsue (Japan), Oct. 28-31 (2008)
  21. M. Shimanuki, Y. Matsumoto, A. Nomura, T. Ikari, M. Naitoh, S. Nishigaki, N. Toyama: "Formation of Carbon Nanotubes on a Polyimide Substrate by Chemical Vapor Deposition Method", 9th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures, Tokyo (Japan), Nov. 11-15 (2007)
  22. T. Ikari, K. Murakami, T. Kawamoto, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Hydrogen-Assisted Reduction of Oxidized Ni(110) Surfaces Studied by Metastable-Induced Electron Spectroscopy", 9th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures, Tokyo (Japan), Nov. 11-15 (2007)
  23. Y. Shirouzu, T. Ikari, N. Kaya, T. Okazaki, K. Yamada, A. Watanabe, M. Naitoh, S. Nishigaki: "Adsorption and reaction of calcium at the Si(111) surface studied by metastable-induced electron spectroscopy", 7th Russia-Japan Seminar on Semiconductor Surfaces, Vladivostok (Russia), Sep. 18-20 (2006)
  24. T. Ikari, T. Matsuoka, K. Murakami, T. Kawamoto, K. Yamada, A. Watanabe, M. Naitoh, S. Nishigaki: "Hydrogen-assisted reduction of the Ni(110)(3x1)-O surface studied by MIES and LEED", 24th European Conference on Surface Science, Paris (France), Sep. 4-8 (2006)
  25. S. Kashirajima, Y. Johdai, T. Ikari, M. Naitoh, S. Nishigaki and F. Shoji: "The study of the formation of CuPc adsorbed on the BLS/Si(100) surface by STM", 24th European Conference on Surface Science, Paris (France), Sep. 4-8 (2006)
  26. T. Ikari, S. Arikado, K. Kameishi, H. Kawahara, T. Matsuoka, K. Yamada, A. Watanabe, M. Naitoh, S. Nishigaki: "Surface structure dependent reaction of Hydrogen-assisted reduction at O/Ni(110) surfaces studied by MIES and LEED", International Symposium on Surface Science and Nanotechnology (ISSS-4), Saitama (Japan), Nov. 14-17 (2005)
  27. S. Kashirajima, T. Ikari, M. Naitoh, S. Nishigaki, F. Shoji: "Adsorption of Ag+H and CuPc on the Si(100) surface with Bi-line structures studied by scanning tunneling", RIVA-5th Iberian Vacuum Meeting, Guimaraes (Portugal), Sep. 18-21 (2005)
  28. Y. Yano, T. Ikari, Y. Jodai, M. Naitoh, S. Nishigaki, N. Toyama, F. Shoji: "Adsorption of hydrogen on the 6H-SiC(0001) (2x3x2x13) surface studied by scanning tunneling microscopy", RIVA-5th Iberian Vacuum Meeting, Guimaraes (Portugal), Sep. 18-21 (2005)
  29. T. Ikari, S. Arikado, K. Kameishi, H. Kawahara, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Oxidation of a cesium-covered Ni(110) surface studied by a metastable-induced electron spectroscopy", 13th International Congress on Thin Films/ 8th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures, Stockholm (Sweden), Jun. 19-23 (2005)
  30. T. Ikari, N. Uchino, S. Nishioka, K. Yamada, A. Watanabe, M. Naitoh and S. Nishigaki: "Influences of the incident He\* velocity on the metastable de-excitation process at surfaces and the resultant electron spectra", 15th International Workshop on Inelastic Ion Surface Collisions, Ise-Shima (Japan), Oct. 17-22 (2004)
  31. K. Tachibana, T. Ikari, M. Naitoh and S. Nishigaki: "Growth of iron-silicide thin layers on clean and hydrogen-terminated Si(100) surfaces studied by AES and LEED", 5th Russia-Japan Seminar on Semiconductor Surfaces, Vladivostok (Russia), Sep. 15-17 (2002)
  32. T. Ikari, T. Kojima, K. Yamada, M. Naitoh and S. Nishigaki: "A metastable-induced electron spectroscopy study on the process of oxygen adsorption at a Ni(110) surface", 11th International Conference on Solid Films and Surfaces, Marseilles (France), Jul. 8-12 (2002)
  33. S. Nishigaki, T. Sugiman, T. Ikari, I. Yokoh, K. Yamada and M. Naitoh: "A metastable de-excitation spectroscopy study on the promotion of nitridation by oxygen/alkali pre-adsorbates at Si(100) surfaces", 19th International Conference on Atomic Collision in Solids, Paris (France), Jul. 29-Aug. 3 (2001)
  34. K. Yamada, T. Sugiman, I. Yokoh, T. Ikari, M. Naitoh and S. Nishigaki: "Alkali-assisted nitridation of Si(001) surfaces studied by metastable de-excitation spectroscopy", 20th European Conference on Surface Science, Krakow (Poland), Sep. 4-7 (2001)