

研究発表／RESULTS

International Conference 2006-2005

2006

1. J. Matsuo,
"Recent Progress and Prospects of Cluster Ion Beam",
MRS-J 2006 Symposium (Tokyo, Japan, 2006/12/9-10)
2. S. Ninomiya, K. Ichiki, Y. Nakata, T. Seki, T. Aoki, J. Matsuo,
"The Effect of Incident Cluster Ion Size on Secondary Ion Yields Produced from Si"
MRS-J 2006 Symposium (Tokyo, Japan, 2006/12/9-10)
3. Y. Nakata, Y. Honda, S. Ninomiya, J. Matsuo,
"Ion-Induced Emission of Amino Acid Molecular Ions from Thin Films"
MRS-J 2006 Symposium (Tokyo, Japan, 2006/12/9-10)
4. T. Aoki and J. Matsuo,
"Molecular Dynamics Simulations of Boron Cluster Implantation",
7th Workshop on Advanced Quantum Beam and Cluster Ion Beam Process Technology
(Tokyo, Japan, 2006/11/6-7)
5. T. Seki and J. Matsuo,
"Surface Processing with High-Energy Reactive Gas Cluster Ion Beams",
7th Workshop on Advanced Quantum Beam and Cluster Ion Beam Process Technology
(Tokyo, Japan, 2006/11/6-7)
6. J. Matsuo,
"Challenging Technologies in "Advanced Nano-Fabrication Process Technology using Quantum Beam" project",
7th Workshop on Advanced Quantum Beam and Cluster Ion Beam Process Technology
(2006/11/6-7, Tokyo, Japan)
7. S. Ninomiya, K. Ichiki, Y. Nakata, T. Seki, T. Aoki, J. Matsuo
"The effect incident cluster ion size on secondary ion yields emitted from Si",
7th Workshop on Advanced Quantum Beam and Cluster Ion Beam Process Technology
(Tokyo, Japan, 2006/11/6-7)
8. J. Matsuo,
"Size effects in gas cluster ion beam process",
15th International Conference on Ion Beam Modification of Materials, (Taormina, Italy, 2006/9/18-22).
9. T. Aoki, J. Matsuo,
"Molecular dynamics simulations of a surface smoothing process with glancing angle gas cluster ion beams",
15th International Conference on Ion Beam Modification of Materials, (Taormina, Italy, 2006/9/18-22).
10. T. Seki, J. Matsuo,
"High-speed processing with high-energy SF6 cluster ion beam",
15th International Conference on Ion Beam Modification of Materials, (Taormina, Italy, 2006/9/18-22).
11. A. Suzuki, E. Bourelle, A. Sato, T. Seki, J. Matsuo
"Unique characteristics of oblique irradiation of gas cluster ion beam"
15th International Conference on Ion Beam Modification of Materials, (Taormina, Italy, 2006/9/18-22).
12. T. Aoki, J. Matsuo
"Molecular Dynamics Simulations of Gas Cluster Ion Impacts for a No-damage Surface Modification Process", 19th International Conference on the Application of Accelerators in Research and Industry, (Texas, USA 2006/8/20-25).

13. T. Seki, J. Matsuo,
"Energy Distribution of High-Energy Cluster Ion Beams",
19th International Conference on the Application of Accelerators in Research and Industry, (Texas, USA 2006/8/20-25).
14. K. Ichiki, S. Ninomiya, T. Seki, T. Aoki and J. Matsuo,
"Surface oxidation of Si assisted by irradiation with large gas cluster ion beam in an oxygen atmosphere",
22nd International Conference on Atomic Collisions in Solids, (Berlin, Germany, 2006/7/21-26).
15. Y. Nakata, S. Ninomiya, J. Matsuo.
"Secondary ion emission from bio-molecular thin films under ion bombardment",
22nd International Conference on Atomic Collisions in Solids, (Berlin, Germany, 2006/7/21-26).
16. S. Ninomiya, Y. Nakata, K. Ichiki, T. Seki, T. Aoki, J. Matsuo
"Measurements of secondary ion emitted from organic compounds bombarded with large gas cluster ions",
22nd International Conference on Atomic Collisions in Solids, (Berlin, Germany, 2006/7/21-26).
17. S. Ninomiya, K. Ichiki, Y. Nakata, T. Seki, T. Aoki, J. Matsuo,
"The effect of incident cluster ion energy and size on secondary ion yields emitted from Si",
22nd International Conference on Atomic Collisions in Solids, (Berlin, Germany, 2006/7/21-26).
18. J. Matsuo,
"Prospects of low energy cluster beams",
22nd International Conference on Atomic Collisions in Solids, (Berlin, Germany, 2006/7/21-26).
19. J. Matsuo, S. Ninomiya, Y. Nakata, K. Ichiki, T. Seki and T. Aoki,
"Novel SIMS with unique ion beams",
9th International Symposium on SIMS and Related Techniques based on Ion-Solid Interactions (Tokyo, Japan, 2006/7/20-21).
20. T. Aoki, J. Matsuo,
"Molecular Dynamics Study of Surface Modification with Glancing Angle Gas Cluster Ion Beams Process"
8th International Conference on Computer Simulation of Radiation Effects in Solids (Washington, USA, 2006/06/18-23).
21. T. Seki, J. Matsuo,
"High-Speed and Precise Nano-Processing with Cluster Ion Beams",
16th International Conference on Ion Implantation Technology (Marseille, France, 2006/06/11-16).
22. J. Matsuo, S. Ninomiya, K. Ichiki, T. Seki, T. Aoki,
"Size Effects on Cluster Ion Beam Process",
16th International Conference on Ion Implantation Technology (Marseille, France, 2006/06/11-16).
23. M. Hada, J. Matsuo,
"Real-time observation of ultrafast phenomena with femtosecond X-ray diffraction"
5th Symposium on Ultrafast Surface Dynamics (Abashiri, Japan, 2006/05/21-25).
24. J. Matsuo, S. Ninomiya, K. Ichiki, T. Aoki, and T. Seki,
"Cluster dependence of Secondary Ion Emission",
19th Annual Workshop on SIMS (CA, USA, 2006/05/16-19).
25. J. Matsuo, S. Ninomiya, Y. Nakata, T. Aoki, and T. Seki
"Biomaterial Analysis with Large Ar Cluster Ions"
19th Annual Workshop on SIMS (CA, USA, 2006/05/16-19)

2005

1. J. Matsuo
"Nano processing by cluster ion beam",
MRS-J 2007 Symposium (Tokyo, Japan, 2007/12/9, Invited)
2. T. Seki, T. Aoki, J. Matsuo,
"High-Speed Nano-Processing with Cluster Ion Beams",
MRS-J 2007 Symposium (Tokyo, Japan, 2007/12/7-9)

3. S. Ninomiya, J. Matsuo, K. Ichiki, H. Yamada, Y. Nakata, Y. Honda, T. Seki, T. Aoki
"Low damage etching and SIMS depth profiling with large Ar cluster ions"
MRS-J 2007 Symposium (Tokyo, Japan, 2007/12/7-9)
4. Y. Honda, Y. Nakata, S. Ninomiya, T. Seki, T. Aoki, J. Matsuo
"SIMS Analysis of Biological Mixtures with Fast Heavy Ion Irradiation"
MRS-J 2007 Symposium (Tokyo, Japan, 2007/12/7-9)
5. T. Aoki and J. Matsuo,
"Molecular dynamics simulations of gas cluster ion impact with glancing angle incident"
8th Workshop on Cluster Ion Beam Technology (Tokyo, Japan, 2007/11/8-9)
6. T. Seki, T. Aoki and J. Matsuo,
"High-Speed Nano-Processing with Reactive Cluster Ion Beam"
8th Workshop on Cluster Ion Beam Technology (Tokyo, Japan, 2007/11/8-9)
7. S. Ninomiya, K. Ichiki, Y. Nakata, Y. Honda, T. Seki, T. Aoki and J. Matsuo,
"Ionization and low damage etching of soft materials with slow Ar cluster ions"
8th Workshop on Cluster Ion Beam Technology (Tokyo, Japan, 2007/11/8-9)
8. J. Matsuo
"What size of cluster is most appropriate for SIMS?"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2)
9. J. Matsuo, S. Ninomiya, Y. Nakata, K. Ichiki, Y. Honda, T. Seki and T. Aoki
"Challenges and prospects for cluster SIMS"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2, Invited)
10. T. Aoki, T. Seki, S. Ninomiya and J. Matsuo,
"MD simulation study of the sputtering process by high-energy gas cluster impact"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2)
11. S. Ninomiya, Y. Nakata, Y. Honda, K. Ichiki, T. Seki, T. Aoki and J. Matsuo,
"A Fragment-free ionization technique for organic mass spectrometry with large Ar cluster ions"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2)
12. S. Ninomiya, K. Ichiki, Y. Nakata, Y. Honda, T. Seki and J. Matsuo,
"The effect of incident velocity on secondary cluster ion emission from Si bombarded with large Ar cluster ions"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2)
13. Y. Nakata, Y. Honda, S. Ninomiya, T. Seki, T. Aoki and J. Matsuo,
"Yield Enhancement of Molecular Ion with MeV-Ion Induced Electronic Excitation"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2)
14. K. Ichiki, S. Ninomiya, Y. Nakata, Y. Honda, T. Seki, T. Aoki and J. Matsuo,
"High sputtering yields of organic compounds by large gas cluster ions"
The 16th International Conference on Secondary Ion Mass Spectrometry
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15. K. Ichiki, S. Ninomiya, T. Seki, T. Aoki and J. Matsuo,
"Nonlinear effects of secondary ion yields emitted from Si by Ar cluster ion beam irradiation"
The 16th International Conference on Secondary Ion Mass Spectrometry
(Kanazawa, Japan, 2007/10/29-11/2)
16. J. Matsuo, S. Ninomiya, K. Ichiki, Y. Nakata, T. Aoki and T. Seki
"Fragment-Free Mass Spectrometry for Bio-molecular Surfaces with Size Selected Cluster SIMS"
AVS 54th International Symposium & Exhibition (Seattle, USA, 2007/10/14-19)

17. T. Seki, J. Matsuo
"Nano-processing with gas cluster ion beams"
15th International Conference on Surface Modification of Materials by Ion Beams (Mumbai, India, 2007/9/30-10/5, Invited)
18. J. Matsuo, T. Aoki, T. Seki
"Cluster Ion Implantation -Prospects and Challenges-"
7th International Workshop on Junction Technology (Kyoto, Japan, 2007/6/8-9, Invited)
19. T. Aoki, T. Seki and J. Matsuo
"MD Study of Damage Structure with Poly-atomic Boron Cluster Implantation"
7th International Workshop on Junction Technology (Kyoto, Japan, 2007/6/8-9)
20. J. Matsuo, S. Ninomiya, K. Ichiki, Y. Nakata, T. Aoki, T. Seki
"Cluster size effect on secondary ion emission"
IUVSTA Workshop (Scotland, UK, 2007/4/23-27, Invited)
21. S. Ninomiya, Y. Nakata, K. Ichiki, Y. Honda, T. Seki, T. Aoki and J. Matsuo
"The effect of incident velocity on secondary ion emission from Si and Arginine with large Ar cluster ions"
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