

## Recent publications in AUV from the NMIJ

### Acoustics

- [1] R. Horiuchi, T. Fujimori, and S. Sato, "Development of a laser-pistonphone for an infrasonic measurement standard", Proc. Acoust. Soc. Am and Acoust. Soc. Jpn 4th Jnt. Meet., 2006.
- [2] R. Horiuchi, T. Fujimori, H. Takahashi and S. Sato, "Final report on key comparison APMP.AUV.A-K1" Metrologia 44, Tech. Suppl. 09001 (2007).
- [3] R. Horiuchi, H. Takahashi, T. Fujimori. S. Sato and S. kiryu, " Current status of research and developoment on acoustic standards at NMIJ", Journal of metrology society of India, 22 (2), 109 - 116 (2007).
- [4] H. Takahashi, T. Fujimori and R. Horiuchi, "Minimizing the sound reflection for free-field calibration of type WS3 microphones by using a virtual pulse method ", Proc. of internoise 2007.

### Ultrasound

- [1] M. Yoshioka, " Difference between Nominal and Measured Active Element Sizes of Hydrophones ", J. J. A. P, 47(5), 3926-3928 (2007).
- [2] Yoshimura Kazuho, Norimichi Kawashima, Shinichi Takeuchi, Takeyoshi Uchida, Masahiro Yoshioka, Tsuneo Kikuchi, Minoru Kurosawa, " Trial Fabrication of Needle-Type Hydrophone with Taper-Type Structure using Hydrothermally Synthesized Lead Zirconate Titanate", Japanese Journal of Applied Physics Vol.47, No.5, 2008, pp.4215-4219.
- [3] Y. Matsuda, "Surface breaking crack evaluation with photorefractive quantum wells and laser-generated Rayleigh waves ", Applied Physics Letters, 89(17), 171902-1~171902-3
- [4] Y. Matsuda, H. Nakano, S. Nagai, and K. Yamanaka, "Precise Sound Velocity Measurement Using Laser Ultrasound and Its Application for Temperature Measurement in Semiconductor Processing (in Japanese)," Journal of the Japanese Society for Non-destructive Inspection 57 (4), 204-209 (2008).

### Vibration

- [1] H. Nozato, T. Usuda, A. Oota, T. Ishigami and K. Kudo, Development of Shock

Acceleration Calibration Machine in NMIJ, Proc. of IMEKO TC-22 Symposium, Merida, Mexico (Nov. 2007).

[2] ISO 16063-41 (DIS): Methods for the calibration of vibration and shock pick-ups. Part 41 Calibration of Laser Vibrometers.

[3] A. Oota, T. Usuda, T. Ishigami, H. Nozato, and Y. Hino, Effect of demodulator unit on laser vibrometer calibration, Eighth International Conference on Vibration Measurements by Laser Techniques: Advances and Applications, Proc. of SPIE Vol. 7098, 70981J, (2008).

[4] T. Usuda, A. Oota, H. Nozato, Y. Hino and H. Aoyama, TRANSPORTABLE CALIBRATION SYSTEM FOR VIBRATION TRANSDUCERS, Proceedings of the MME2008, Aachen, Germany (Sep. 2008).