Commission K (Electromagnetics in Biology & Medicine) Activity Report
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by
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1. Update on EMF safety issue

The second meeting of Japanese URSI-Commission K for the 21st term of the Science Council of Japan was held on February 23, 2010, at Seinen-Kaikan, Okinawa.

In this meeting, the progress of AP- RASC'10, Toyama, was discussed. After discussion, Dr. Kawai of Department of Neurosurgery, School of Medicine, University of Tokyo, gave us very interesting lecture on "Clinical applications of the electric and magnetic stimulations in the field of Neurosurgery" as a new research topic. The electrical and magnetic stimulations are used for neurosurgical interventions in the managements of epilepsy, Parkinson disease and chronic mental disorder. Dr. Kawai presented the overviews of the method, effectiveness and weakness of the vagus nerve stimulation in human with intractable epilepsy. He also talked the deep brain stimulation in the involuntary movement people as Parkinson's disease.

The deep brain stimulation with electric and magnetic stimulations is a promising new technology for the clinical treatment of intractable diseases.

2. Meetings

(a) Past meetings

(1) Occupational exposure to electromagnetic fields: paving the way for a future EU initiative. October 6-9. Umea, Sweden (http://www.av.se/inenglish/aboutus/eu/electromagnetic.aspx)
(2) Second scientific meeting of the Health & Radiofrequencies Foundation. October 20-21, 2009, Paris, France
(3) Asia-Pacific Microwave Conference. December 7-10, 2009, Singapore (http://www.apmc2009.org)
(4) World Congress 2009 on Medical Physics and Biomedical Engineering. September 7-12, 2009, Munich, Germany
(5) 6th International Workshop of Electromagnetic Compatibility (CEM 2009). November 12-14, 2009, Constanta, Romania
(6) International Conference on Electromagnetic Fields, Health and Environment – EHE, November 17-19, Guaruja, San Paolo, Brazil

(b) Future meetings

(1) Progress in electromagnetic Research Symposium (PIERS) 22-26 March 2010, Xi'an, China (http://piers.mit.edu/piers/)
(2) Asia-Pacific Symposium on Electromagnetic Compatibility, 12-16, April 2010, Beijing, China (http://www/apemc2010.org/)
(3) ESHO 26th Annual Meeting May 20-22, Rotterdam, The Netherlands (http:///www.sho.info/)
(4) EU COST Action Meeting May 25-29, 2010, Bordeaux, France, Joint event with URSI Commission K (http://www.cost-bm0704.org) and (http://www.ursi.org)
(5) Pan-Pacific EMC Joint Meeting May 27-28, 2010, Cyberscience Center, Sendai, Japan, http://www.ieice.org/cs/emcj/jpn/international/pan-pacific
(6) 28th Annual International Symposium on Man and His Environment in Health and Disease (The Chemical Mechanisms leading to ELF Sensitivity), June 3-6, 2010, Double Tree Hotel Dallas, Texas, USA
(7) 32th BEMS Annual Meeting, Seoul KyoYuk MunHwa HoeKwan, June 13-18, 2010, Seoul, Korea. (http://www.bioelectromagnetics.org/)
(8) Progress in Electromagnetics Research Symposium (PIERS) 2020, July 5-8, Cambridge, MA

(USA) (http://piers.mit.edu.piers/)

(9) 2010 Asia-Pacific Radio Science Conference, 22-26, September, 2010 Toyama, Japan (http://www.ap-rasc10.jp/)

(10) MobiHealth 2010, International ICST Conference on Wireless Mobile Communication and Healthcare October 18-20, 2010, Ayia Napa, Cyprus, (http://mobihealth.name/orgncomm.shtml)

(11) 10th EBEA International Congress, February 21-24, 2011, Rome, Italy

(12) 33th BEMS Annual Meeting, June 12-17, 2011, Halfax, Nova Scotia, Canada

(13) Sixth International Workshop on EMF. October 11-16, 2010, Bodrum, Turkey

(14)IEEE Antennas and Propagation Society International Symposium and USNC-URSI National Radio Science Meeting, July 8-14, 2012, Chicago, Illinois, USA (http://www.ece.uic.edu/2012aps-ursi)

3. Published papers by the member of Japanese Commission K(2008~)

- Abe M., Nishio K, Hatakeyama M, Hanyu N, Tanaka T, Tada M, Nakagawa T, Sandhu A and Handa H [2009], "Development of high throughout automated bioscreening system using magnetic beads and elucidation of molecular mechanisms of anticancer drugs (in Japanese with English summary)." Journal of the Magnetic Society of Japan, vol.33, pp.54-58.
- Akimoto, S., T. Nagaoka, S. Kikuchi, K. Saito, S. Wantanabe, M. Takahashi and K. Ito [2008a], "Calculation of SAR in a Fetus Exposed to EMF from a Normal-Mode Helical Antenna with a Metallic Case close to the Abdomen of a Pregnant Woman", iWAT2008, P214, pp.223-226, March 2008.
- Akimoto, S., T. Nagaoka, S. Kikuchi, K. Saito, S. Wantanabe, M. Takahashi and K. Ito [2008b], "SAR Calculations for Pregnant Woman with her Fetus and Placenta in Various Positions Exposed to EM Waves from Wireless Terminal", EUROEM 2008, European Electromagnetics, P.167, July 2008.
- Arima, T., S. Watanabe, K. Wake and T. Uno [2008], "Efficient Numerical Modeling of Lossy Ground Plane for FDTD Analysis of Induced Current in a Human Body Standing", International Commission on Non-Ionizing Radiation Protection (ICNIRP), Oct. 2008.
- Arima, T., K. Wake, S. Watanabe and T. Uno [2009], "The dependence of average SAR in child head on antenna positions of mobile phones", BioEM2009, June 2009.
- Cardis, E., I. Diltour, S. Mann, M. Moissonnier, T. Masao, N. Varsier, K. Wake and J. Wiart [2008], "Distribution of RF energy emitted by mobile phones in anatomical structures of the brain", Physics in Medicine and Biology, Vol. 53, p. 2771-2783.
- Cespedes O and Ueno S [2009], "Effects of radio frequency magnetic fields on iron release from cage proteins." Bioelectromagnetics, vol. 30, pp.336-342.
- Dimbylow, P., A. Hirata and T. NagaokaS [2008], "Intercomparison of whole-body averaged SAR in European and Japanese voxel phantoms", Physics in Medicine and Biology, Vol. 53, p. 5883-5897.
- Dimbylow, P., T. Nagaoka and X.G. Xu [2009], "A comparison of foetal SAR in three sets of pregnant female models", Physics in Medicine and Biology, Vol. 54, p. 2755-2767.
- Faraone A., G. Bit-Babik, J. Keshvari, T. Onishi, J. Pack, J. Pledl, J. Prats, M. Wood, and P. Zollman [2009], "Conservative Evaluation of Combined Exposure from Multiple RF Sources (100 kHz - 300 GHz)," Proceedings of the BioEM2009, P-90, June.
- Fujita A., Kawahara T, Inoue S and Omori H [2010], "Development of a higher-power intermediate-frequency magnetic field exposure system for in vitro studies," Bioelectromagnetics, vol.31, no 2, pp.156-163.
- Fukuda M., Mizutani N and Waseda K [2009], "Influence of electromagnetic interference on implanted cardiac arrhythmia devices in and around a magnetically levitated linear motor car," J Artif Organs, vol. 8, pp.154-160.

- Furiya K, Takura T, Sato F, Matsuki H and Sato T [2009]: Examination of a multidirectional exciting coil for functional hyperthermia (in Japanese with English summary). Journal of the Magnetic Society of Japan, vol.33, p.333-336.
- Furubayashi T, Ushiyama A, Terao Y, Mizuno Y, Shirasawa K et al [2009], "Effects of short-term W-CDMA mobile phone base station exposure on women with or without mobile phone related symptoms." Bioelectromagnetics, vol.30, pp.100-113.
- Goto M, Moriguchi H, Takeyama Y, Kotani K and Jimbo Y [2009], "Micropatterning of neurite outgrowth in vitro using micropipette drawing (in Japanese with English summary)." IEEJ Trans. EIS, Vol.129 (7), pp.1231-1236.
- Hamada, L., K. Sato, N. Ishii and S. Watanabe [2008a], "A SAR-Probe Calibration System Using Reference Dipole Antenna in Tissue-Equivalent Liquid", 2008 Asia-Pacific Symposium on Electromagnetic Compatibility, p.116-119, May 2008.
- Hamada, L., K. Sato, N. Ishii, N. Ikarashi and S. Watanabe [2008b], "Development of the SAR-probe calibration systems using a reference dipole antenna in head-simulating liquid -improvement of a prototype system of 900 MHZ and 2.45 GHZ", Bioelectromagnetics Society Annual Meeting 2008, P-25, P.249-251, June 2008.
- Hamada, L., Y. Miyota, K. Sato, A. Tanaka, S. Watanabe and S. Iwasaki [2008c] "Boundary effects in SAR-probe calibration and SAR measurement", Bioelectromagnetics Society Annual Meeting 2008, P-24, P.246-248, June 2008.
- Hamada, L., T. Iyama, T. Onishi and S. Watanabe [2009a], "The Specific Absorption Rate of Mobile Phones Measured in a Flat Phantom and in the Standardized Human Head Phantom", EMC09, 21S4-1, P.245-247, July 2009.
- Hamada, L., Iyama T., Onishi T. and Watanabe S [2009b], "A Corner-Rounded Flat Phantom for the Compliance Test for Mobile Phones," Proceedings of the BioEM2009, P-56, June.
- Hayami T, Iramina K, Chen X and Sunagawa K [2008], "Magnetic field variation by fiber loss on a peripheral nerve (in Japanese with English summary)." Journal of the Magnetic Society of Japan, vol.32, pp.96-102.
- Higashiyama J., Onishi T and Tarusawa Y [2009], "RF Fields Strength Measurement Method for Evaluation of Human Exposure in Modern Radio Frequency Spectrum Use," Proceedings of the BioEM2009, P-182, June.
- Hikage, T., L.R. Harris, T. Nojima, A.Y. Simba and S. Watanabe [2008], Estimations for Implantable Cardiac Pacemakers EMI from Cellular Radios in Narrow Space Multi Reflection Environments", APEMC 2008, P.128-131, May 2008.
- Hirata, A., S. Watanabe, M. Taki, O. Fujiwara, M. M. Kojima and K. Sasaki [2008a], "Computation of temperature elevation in rabbit eye irradiated by 2.45-GHz microwaves with different field configurations", Health Physics, Vol. 94, No. 2, p.134-144.
- Hirata, A. Y. Sugiyama, M. Kojima, H. Kawai, Y. Yamashiro, O. Fujiwara, S. Watanabe and K. Sasaki [2008b], "Computational model for calculating body-core temperature elevation in rabbits due to whole-body exposure at 2.45 GHz", Physics in Medicine and Biology, Vol. 53, p. 3391-3404.
- Hirata, A., N. Ito, O. Fujiwara, T. Nagaoka and S. Watanabe [2008c], "Conservative estimation of whole-body-averaged SARs in infants with a homogeneous and simple-shaped phantom in the GHz region", Physics in Medicine and Biology, Vol. 53, pp. 7215-7223.
- Hirata, A., O. Fujiwara, T. Nagaoka and S. Watanabe [2009a], "Variability of Whole-body Averaged SAR in Models of Adults and Children for Plane-Wave Exposure", BioEM2009, June 2009
- Hirata A and Fujiwara O [2009b], "Modeling time variation of blood temperature in a bioheat equation and its application to temperature analysis due to RF exposure." Phys Med Biol, vol.54 (10), pp.N189-N196.
- Hirata A., Wake K, Watanabe S and Taki M [2009c], "In-situ electric field and current density

in Japanese male and female models for uniform magnetic field exposures," Radiation Protection Dosimetry, vol.135(4), pp.272-275.

- Hirose H., N. Sakuma, N. Kaji, K. Nakayama, K. Inoue, M. Sekijima, T. Nojima and J.Miyakoshi [2007], "Mobile phone base station-emitted radiation does not induce phosphorylation of Hsp27," Bioelectromagnetics, vol. 28, no.1, pp. 99-108.
- Hirose, H., T. Suhara, N. Kaji, N. Sakuma, M. Sekijima, T. Nojima, and J. Miyakoshi [2008], "Mobile Phone Base Station Radiation Does not Affect Neoplastic Transformation in BALB/3T3 Cells," Bioelectromagnetics, vol. 29, no. 1, pp. 55-64.
- Hirose, H., A. Sasaki, N. Ishi, M. Sekijima, T.Iyama, T.Nojima and Y.Ugawa [2010], "1950 MHz IMT-2000 field does not activate microglial cells in vitro," Bioelectromagnetics, vol.31, no.2, pp.104-112.
- Hirota S, Matsuura M, Masuda H, Ushiyama A, Wake K, Watanabe S, Taki M and Ohkubo C (2009): Direct observation of microcirculatory parameters in rat brain after local exposure to radio-frequency electromagnetic field. The Environmentalist, vol.29, pp.186-189.
- Hoshino Y, Tanaka K, Awano S, Iijima K, Fujimura K, Uchikawa Y and Kobayashi K [2009], "Analysis of rest and exercise-induced 3-D magnetocardiogram and body surface potential map using singular value decomposition (in Japanese with English summary)." Journal of the Magnetic Society of Japan, vol.33, pp.347-352.
- Hosono, T., K. Maruyama, T. Sakai, K. Wake, Y. Suzuki, S. Watanabe and O. Hashimoto [2009], "Development of a measurement system for measuring intermediate-frequency Magnetic-field for simulation of induced current density in a human body", BioEM2009, P-48, June, 2009.
- Hozumi Y, Seto T, Hirasawa M, Tsuji M and Okuyama A [2009], "Kinetics of microplasma atmospheric ion generation correlated with discharge current." Journal of Electrostatics, vol. 67, pp.1-6.
- Ikarashi, N., T. Nagano, N. Ishii, K. Sato, L. Hamada and S. Watanabe [2008a], "Estimation of the antenna gain in the liquid using the measured data in the far-field region by the network analyzer", EMCJ2008, Vol. 4, pp. 99-104.
- Ikarashi, N., N. Ishii, K. Sato, L. Hamada and S. Watanabe [2008b], "Validation of Gain Measurement in the Liquid Based on Extended Friis Transmission Formula", International Symposium on Antennas and Propagation 2008, pp. 1-4, Oct. 2008.
- Ikehata, M., S. Yoshie, Y. Suzuki and T. Hayakawa [2007a], "Evaluation of mutagenicity and co-mutagenicity of a static magnetic field in yeast cells," International Conference on Magneto-Science ICMS2007, IIP-22, p. 132, November.
- Ikehata, M., S. Yoshie, Y. Suzuki, T. Hayakawa [2007b], "Mutagenicity and co-mutagenicity of strong static magnetic field in yeast cells," 1st Asian Conference on Environmental Mutagens & 36th Annual Meeting of The Japanese Environmental Mutagen Society, November.
- Ikehata, M., S. Yoshie, Y. Suzuki, M. Taki and T. Hayakawa [2007c], "Evaluation of mutagenicity of complex magnetic fields with static and extremely low frequency components (in Japanese with English summary)," IEICE Technical Report, EMCJ2007-91, pp. 57-61.
- Ikehata, M., Y. Suzuki, K. Wake, S. Yoshie, S. Nakasono and M. Taki [2008a], "Evaluation of mutagenicity by exposure to intermediate frequency magnetic fields", Proceedings of International Symposium on Biological and Physiological Engineering, p119, January.
- Ikehata, M., S. Yoshie, N. Hirota and T. Hayakawa [2008b], "Effects of static magnetic field on mutagenesis in *in vitro*," Proceedings of the 3rd international Workshop on Materials Analysis and processing in Magnetic Fields (MAP3), pp. 7-13, May.
- Ikehata, M., S. Yoshie, Y. Suzuki, M. Taki and T. Hayakawa [2008c], "Evaluation of mutagenic potential of complez magnetic fields with static and time-varying components," Proceedings of the Bioelectromagnetics Society the 30th Annual Meeting (BEMS2008), P-81, pp. 365-366,

June.
- Ikehata, M., S. Yoshie, Y. Suzuki, M. Taki, T. Hayakawa, [2008d], "Evaluation of mutagenicity of combined magnetic fields with static and extremely low frequency components," Proceedings of the XXIX General Assembly of the International Union of Radio Science (URSI), k03-b.3, August.
- Ikehata, M., Y. Suzuki, K. Wake, S. Yoshie, S. Nakasono and M. Taki [2008e], "Evaluation of mutagenicity by exposure to intermediate frequency (2, 10, 20 kHz) magnetic fields," The proceedings of 12th General Assembly of International Radiation Protection Association (IRPA12), p. 969, October.
- Ikehata, M., S. Yoshie, N. Hirota and T. Hayakawa, [2009a] "Effects of Static Magnetic Field on Mutagenesis in in vitro", Journal of Physics: Conference Series, 156, 012015.
- Ikehata, M., S. Nakasono, Y. Suzuki, S. Yoshie, K. Wake, M. Taki and T. Hayakawa [2009b], "Evaluation of micronuculeus formation in *in vitro* by exposure to intermediate frequency magnetic fields," Proceedings of the BioEM2009, P-166, June.
- Ikehata M., Suzuki Y., Wake K., Yoshie S., Nakasono S. and Taki M [2009c], "Evaluation of mutagenicity by Exposure to Intermediate Frequency (2, 10 and 20kHz) Magnetic fields using in vitro genotoxicity tests", 10th International conference on environmental mutagens, DD051, p. 140, Aug.
- Ikehata, M., S. Yoshie, Y. Suzuki, M. Taki and T. Hayakawa [2009d], "Evaluation of Mutagenicity of Combined Magnetic Field Exposure with Static and Extremely Low Frequency Components", The International Conference on EMF, Health and Environment 2009, November.
- Ikehata, M. [2009e], "EMF Issues in Railway Systems", J. the Inst. of Electrostatics Japan, vol. 33, pp. 194-199 (in Japanese).
- Imae T, Shinohara H, Sekino M, Ueno S, Ohsaki H, Mima K and Ohtomo K [2008], "Evaluation of membrane permeability of rat brain using diffusion magnetic resonance imaging (in Japanese with English summary)." Journal of the Magnetic Society of Japan, vol.32, pp.491-494.
- Ishii, N., K. Sato, L. Hamada and S. Watanabe [2008a], "Gain Calibration in Near-Field Region of Antenna in Tissue-Equivalent Liquid for SAR Assessment", 2008 Asia-Pacific Symposium on Electromagnetic Compatibility, pp. 112-115. May 2008.
- Ishii, N., H. Shiga, N. Ikarashi, K. Sato, L. Hamada and S. Watanabe [2008b], "Simultaneous measurement of antenna gain and complex permittivity of liquid in near-field region using weighted regression", IEICE transactions on communications, Vol. E91-B, No,6., p.1831-1837.
- Ishii, N., T. Watanabe, Y. Miyota, K. Sato, L. Hamada and S. Watanabe [2009], "Approximate Expression of Near Field Gain in Tissue Equivalent Liquid for SAR Evaluation", 2009 International Conference on Electromagentic Near-Field Characterization and Imaging, pp. 37-42, June 2009.
- Iyama T., T. Onishi, Y. Tarusawa, S. Uebayashi, and T. Nojima [2008a], "Novel Specific Absorption Rate (SAR) Measurement Method Using a Flat Solid Phantom," IEEE Trans. EMC, vol. 50, no. 1, pp. 43 – 51.
- Iyama, T., K. Kiminami, T. Onishi, and T. Nojima [2008b], "Average SAR Measurement Using Multiple-Probe-Embedded Flat Solid Phantoms," Proceedings of the Bioelectromagnetics Society the 30th Annual Meeting (BEMS2008), P-16, June.
- Iyama T., K. Kimianmi, and T. Onishi [2009], "Applicability of Three-Axis Electro-Optic (EO) Probe for Specific Absorption Rate (SAR) Measurement," IEICE Trans. Commun., vol. E92-B, no. 4, pp. 1414 – 1417.
- Kagawa M., Shimooka T. and Shimizu K [2009], "Effect of ELF Electrostimulation on Macrophage Scavenger Receptor", Proceedings of EMC'09 Kyoto, pp.393-396.

- Kamimura, Y., H. Mishima, T. Furubayashi, Y. Mizuno, R. Hanajima, A. Nishikata, K. Wake, S. Watanabe and Y. Ugawa [2008], "Comparison of the threshold currents for perception determined by three different threshold tracking methods", BEMS2008, p. 136-138, June 2008.
- Kamimuya, Y., T. Hikage, T. Nojima, A.Y. Simba and S. Watanabe [2009a] "Effects of Losses Due to Human Phantoms on 3-dimensional Electromagnetic Field Distribution in Elevators", PIER2008, o. 194, March 2009.
- Kamimura, Y., T. Furubayashi, Y. Terao, Y. Mizuno, R. Hanajima, T. Sakai, K. Wake, S. Watanabe and Y. Ugawa [2009b], "The Threshold Currents for Perception Determined by Two Different Threshold Tracking Methods", BioEM2009, P-126, June 2009.
- Kanezaki, A., T. Sakai, S. Watanabe, A. Hirata and H. Shirai [2008a], "Theoretical Analysis of Temperature Elevation in a Human Body Exposed to Millimeter Wave", PIERS2008, p.682, July 2008.
- Kanezaki, A., S. Watanabe, A. Hirata and H. Shirai [2008b], "Theoretical analysis for temperature elevation of human body due to millimeter wave exposure", CIBEC08, SB-62, pp.1-4, Dec. 2008.
- Kanezaki A., Hirata A, watanabe S and Shirai H [2009], "Effects of dielectric permittivities on skin heating due to millimeter wave exposure." Biomedical Engineerin online vol.8 (20) pp.1-23.
- Kato, K., H. Matsuki, F. Sato, T. Sato, and N. Handa [2009], "Duplex communicable implanted antenna for magnetic direct feeding method: Functional electrical stimulation," JOURNAL OF APPLIED PHYSICS, vol.105, 07B316.
- Kawai, H., T. Nagaoka, S. Watanab, K. Saito, M. Takahashi and K. Ito [2010] "National dosimetry in embryos exposed to electromagnetic plane waves over the frequency range of 10 MHz to 1.5 GHz", Physics in Medicine and Biology, 55, 1, pp.N1-N11, Jan. 2010
- Kawamura, Y., T. Hikage, T. Nojima, A.Y. Simba and S. Watanabe [2009], "Effects of Losses Due to Human Phantoms on 3-dimensional Electromagnetic Field Distribution in Elevators", PIERS 2009, p. 194
- Kawamura T., Saito K., Kikuchi K., Takahashi, M and Ito K [2009], "Specific absorption rate measurement of birdcage coil for 3.0-T magnetic resonance imaging system employing thermographic method," IEEE Transactions on Microwave Theory and Techniques, vol. 57(10), pp. 2508-2514.
- Kiminami K., T. Iyama, T. Onishi, and S. Uebayashi [2008a], "Novel Specific Absorption Rate (SAR) Estimation Method Based on 2-D Scanned Electric Fields," IEEE Trans. EMC, vol. 50 (4), pp. 828 – 836.
- Kiminami K., T. Iyama and T. Onishi [2008b], "Simple Estimation Method Based on Electric Fields on a Two-Dimensional Plane for SAR Measurement," Proceedings of the Bioelectromagnetics Society the 30th Annual Meeting (BEMS2008), P-15, June.
- Kiminami K., T. Iyama and T. Onishi [2008c], "A Three-Axis Electro-Optic Probe for Specific Absorption Rate Measurement," Proceedings of the XXIX General Assembly of the International Union of Radio Science (URSI), KAE. 3, August.
- Kimura T, Takahashi K, Suzuki Y, Konishi Y, Ota Y, Mori C, Ikenaga T, Takanami T, Saito R, Ichiishi E, Awaji S, Watanabe K and Higashitani A [2008], "The effect of high strength static magnetic felds and ionizing radiation on gene expression and DNA damage in Caenorhabditis elegans." Bioelectromagnetics, vol. 29, pp.605-614.
- Kiyokawa T., T. Sakurai and J. Miyakoshi [2008], "Effects of magnetic fields generated by induction heating (IH) cook tops on genotoxicity and HSP expression in cultured cells," The proceedings of the Bioelectromagnetics Society 30th Annual Meeting, P-93, pp. 386-387, June.
- Kiyokawa T., T. Sakurai and J. Miyakoshi [2009], "Effects of magnetic fields generated by induction heating (IH) cooktops on mutagenicity and HSP expression in cultured cells," The

proceedings of BioEM2009, P-153, June.
- Kogure S., Wada K and Suzuki Y [2009], "Development of a magnetic field generator at 20 kHz using a voltage-source inverter for biological research,"
- Kojima, M., T. Sakai, Y. Yamashiro, Y. Suzuki, Y. Sakamoto, Y. Kawakami, S. Watanabe, M. Taki, H. Sasaki and K. Sasaki [2008a], "Investigation of Frequency Specificity of Millimeter Wave Exposure through Ocular Temperature Measurement and Heat Transportation", ARVO2008.
- Kojima, M., T. Sakai, Y. Suzuki, Y. Yamashiro, Y. Sakamoto, Y. Kawakami, S. Watanabe , M. Taki, K. Sasaki and H. Sasaki [2008b], "Investigation of frequency specificity of quasi- and millimeter wave exposure through ocular temperature measurement and heat transportation", BEMS2008, P-115, p.440.
- Kojima, M., T. Sakai, Y. Yamashiro, Y. Suzuki, Y. Sakamoto, Y. Kawakami, S. Watanabe, K. Wake, M. Taki, A. Hirata, Y. Kamimura, H. Sasaki and K. Sasaki [2008c], "Investigation for existence of wavelength characteristic of quasi- and millimeter wave bands", 2008 URSI General Assembl y , KP2.14, pp.1-4.
- Kojima M., Hanazawa M, Yamashiro Y, Sasaki H, Watanabe S and Taki M [2009], "Acute ocular injuries caused by 60-GHz millimeter-wave," Heath Phys, vol.97(3), pp.212-218.
- Komai, T., T. Sato, F. Sato, H. Matsuki and T. Sato [2009], "A Study of Contactless Power Transmission for an Implantable Medical Device (in Japanese with English summary)," Journal of the Magnetics Society of Japan, vol.32, pp.328-332.
- Koyama, S., Y. Takashima, T. Sakurai, Y. Suzuki, M. Taki and J Miyakoshi [2007], "Effects of 2.45 GHz Electromagnetic Fields with a Wide Range of SARs on Bacterial and HPRT Gene Mutations," Journal of Radiation Research, vol. 48, pp. 69-75.
- Koyama, S., T. Sakurai, T. Nakahara and J. Miyakoshi [2008], "Extremely low frequency (ELF) magnetic fields enhance chemically induced formation of apurinic/apyrimidinic (AP) sites in A172 cell," International Journal of Radiation Bioloy, vol. 84, pp. 53-59.
- Koyama D, Kim BS, Sagae T, Uchikawa Y and Kobayashi K (2008): Discussion of ST segment of exercise-induced 3D MCGs (in Japanese with English summary). Journal of the Magnetic Society of Japan, vol. 32, pp.36-41.
- Kozai, M., A. Nishikata, T. Sakai and S. Watanabe [2008a], "Measurement and analysis of millimeter-wave focusing beam for thermal sensation threshold experiments", 6th IASTED International Conference on Biomedical Engineering - BioMED 2008, pp. 1-6.
- Kozai, M., A. Nishikata, T. Sakai and S. Watanabe [2008b], "Measurement and Analysis of Millimeter-Wave Focusing Beam for Thermal Sensation Threshold Experiments", Biomed 2008, Vol. 2008, No. 2, pp. 338-343.
- Kozai, M., A. Nishikata, T. Wakai, K. Wake, S. Watanabe, H. Enomoto and Y. Ugawa [2009], "Measurement of Thermal Sensation Threshold for Converging Millimeter-wave Beam Exposure by Constant Method", BioEM2009, P-122.
- Loader, B., L. Hamada, S. Watanabe and D. Bownds [2009], "SAR probe calibration: the results of an intercomparison study", EMC09, 21S1-7, pp. 81-83.
- Maruyama, K., Y. Suzuki, M. Taki, K. Wake, S. Watanabe and O. Hashimoto [2008a], "Coupling Characteristic of Adult and Children with Non-uniform Magnetic Field", 2008 URSI General Assembly, KAEp2, pp. 1-4.
- Maruyama, K., Y. Suzuki, M. Taki, K. Wake, S. Watanabe and O. Hashimoto [2008b], "Averaging procedures in evaluation of induced current density and internal electric field in a human body exposed to magnetic field in intermediate frequency bands", 5th International Workshop on Biological Effects of Electromagnetic Fields, PSII:8, pp. 1-6.
- Masuda H, Ushiyama A, Takahashi M, Wang J, Fujiwara O and Hikage T [2009], "Effects of 915 MHz electromagnetic field radiation in TEM cell on the blood-brain barrier and neurons in the rat brain." Radiation Research, vol. 172 (1), pp.66-73.

- Matsui H., T. Sakurai, T. Kiyokawa and J. Miyakoshi [2008], "Effects of exposure to radiofrequency fields (UMTS/IMT-2000; 1950MHz) on micronucleus formation in HL-60 cells," The proceedings of the Bioelectromagnetics Society 30th Annual Meeting, P-94, pp. 387-389, June.
- Matsumoto H and Hashimoto K [2009], "Solar Power Satellite/Station," IEICE, vol.92 (9), pp.755-760 (in Japanese)
- Miyakoshi J., E. Horiuchi, T. Nakahara and T. Sakurai [2007], "Magnetic fields generated by an induction heating (IH) cook top do not cause genotoxicity *in vitro*," Bioelectromagnetics, vol. 28, pp. 529-537.
- Miyakoshi, J. [2008], "Effects of Static Magnetic Field at the Cellular Level," ISMRM 16th Scientific Meeting and Exhibition and the SMRT 17th Annual Meeting, May.
- Miyakoshi, J. [2009], "Advances in Electromagnetic Fields in Living Systems," Vol. 5, Health Effects of Cell Phone Radiation, (J. Miyakoshi, M. J. Schoemaker, A. W. Preece, N. Leitgeb, P. Bernardi and J. C. Lin.) J. C. Lin. (Editor), Springer, USA
- Miyamori, J., A. Haga, Y. Kakubari, F. Sato, H. Matsuki and T. Sato [2009], "Examination of Phase Excitation in a Desktop CLPS (in Japanese with English summary)", Journal of the Magnetics Society of Japan, vol.33, pp.110-113.
- Mizuno Y., Moriguchi Y, Hikage T, Terao Y, Ohnishi T and Nojima T [2009], "Effects of W-CDMA 1950 MHz EMF emitted by mobile phones on regional cerebral blood flow in humans," Bioelectromagnetics vol.30, pp.536-544.
- Monzen, S., K. Takahashi, T. Toki, E. Ito, T. Sakurai, J. Miyakoshi and I. Kashiwakura [2009], "Exposure to a MRI-type high-strength static magnetic field stimulates megakaryocytic/erythroid hematopoiesis in $CD34^+$ cells from human placental and umbilical cord blood," Bioelectromagnetics, vol. 30, pp. 280-285.
- Motoyama J, Hakata T, Kato R, Yamashita N, Morino T and Honda H (2008): Size dependent heat generation of magnetite nanoparticles under AC magnetic field for cancer therapy. BioMagnetic Research and Tehcnology (open Accsess) 6, pp.1-6.
- Nagaoka, T., S. Amimoto, K. Saito, M. Takahashi, K. Ito and S. Watanabe [2008a], "Dependence of fetal SAR on position of fetus and placenta under whole-body exposure of RF electromagnetic fields", BEMS2008, P-37, p. 273-274.
- Nagaoka, T. and S. Watanabe [2008b], "Technique using implicit fairing and specific absorption rates to improve spatial resolution of whole-body human voxel models exposed to plane waves in GHz bands", 2008 URSI General Assembly, KP1p11, p. 1-4.
- Nagaoka, T., K. Saito, M. Takahashi, K. Ito and S. Watanabe [2008c], "Anatomically Realistic Reference Models of Pregnant Women for Gestation Ages of 13, 18, and 26 Weeks", IEEE EMBS 2008, pp. 2817-2820.
- Nagaoka, T., K. Saito, M. Takahashi, K. Ito and S. Watanabe [2008d], "Estimating specific absorption rates in pregnant women by using models at 12-, 20-, and 26-weeks' gestation for plane wave exposures", EMC EUROPE 2008, pp. 205-208.
- Nagaoka, T., T. Niwa and S. Watanabe [2008e], "Development of anatomically realistic whole-body model of three-year-old child", 5th International Workshop on Biological Effects of Electromagnetic Fields, PS?:11, p. 1-6.
- Nagaoka, T. and S. Watanabe [2008f], "Whole-body-averaged SAR for exposure to electromagnetic radiations in the frequency range from 30 MHz to 6 GHz in anatomically realistic three- and seven-year-old-child models", 6th International NIR Workshop of ICNIRP.
- Nagaoka, T. and S. Watanabe [2008g], "SARs in a three-year-old-child: Comparison between an anatomically realistic model and uniform and nonuniform scaling models", First Internatinal Symposium on Applied Sciences in Biomedical and Communication Technologies, p. 1-2.
- Nagaoka, T., E. Kunieda and S. Watanabe [2008h], "Proportion-corrected scaled voxel models

for Japanese children and their application to the numerical dosimetry of specific absorption rate for frequencies from 30 MHz to 3 GHz", Physics in Medicine and Biology, Vol. 53, pp. 6695-6711.

- Nagaoka, T. and S. Watanabe [2008i], "Postured voxel-based human models for electromagnetic dosimetry", Physics in Medicine and Biology, Vol. 53, pp. 7047-7061.
- Nagaoka, T. and S. Watanabe [2008j], "Development of anatomically realistic whole-body models of children and their use in electromagnetic dosimetry", CIBEC08, SB-107.
- Nagaoka, T., K. Saito, M. Takahashi, K. Ito and S. Watanabe [2009a], "Estimation of Specific Absorption Rates in Pregnant Women and Their Fetuses at Various Stages of Pregnancy", BioEM2009, P25.
- Nagaoka, T. and S. Watanabe [2009b], "Estimation of Variability of Specific Absorption Rate with Physical Description of Children Exposed to Electromagnetic Field in the VHF Band", 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society.
- Nagatomo T, Abe H, Toyoshima T, Fujimoto H, Kohno R and Kondo S [2009], "Electromagnetic interference with a bipolar pacemaker by an induction heating (IH) rice cooker." International Heart Journal, vol. 50 (1), pp.133-137.
- Nagaya, Y., A. Hirata, O. Fujiwara, T. Nagaoka and S. Watanabe [2009], "A formula and uncertainty of GHz-Band Whole-Body average SAR based on the correlation between absorption cross section and body surface area of human", IEICE Transactions on Communications, Vol. J91-B, No. 2, p.199-206
- Nakamichi N., Ishioka Y, Hirai T, Ozawa S, Tachibana M and Nakamura M [2009], "Possible promotion of neuronal differentiation in fetal rat brain neural progenitor cells after sustained exposure to static magnetism," J Neurosci Res
- Nakasono, S., M. Ikehata, M. Dateki, S. Yoshie, T. Shigemitsu and T. Nagishi [2008a] "Intermediate frequency magnetic fields did not have micronucleus formation potential in *in vitro* tests," Proceedings of the Bioelectromagnetics Society the 30th Annual Meeting (BEMS2008), P-67, pp. 340-341, June.
- Nakasono S, Ikehata M, Dateki M, Yoshie S, Shigemitsu T and Negishi T [2008b], "Intermediate frequency magnetic fields do not have mutagenic, co-mutagenic or gene conversion potentials in microbial genotoxicity tests." Mutation Research, vol. 649, pp.187-200.
- Nakasono, S., M. Ikehata, M. Dateki, S. Yoshie and T. Nagishi [2009a] "Intermediate frequency magnetic fields did not have genotoxic potentials in mouse lymphoma assay (MLA)," Proceedings of the BioEM2009, P-152, June.
- Nakasono S., Ikehata M and Negishi T [2009b], "Intermediate frequency magnetic fields did not have genotoxic potentials in vitro genotoxicity tests, 10th International conference on environmental mutagens, EM075, p. 199, Aug.
- Narita, E., T. Sakurai, M. Taki and J. Miyakoshi [2009], "Influence of a high-frequency electromagnetic field at 2.45 GHz on neurite outgrowth in PC12VG cells," The proceedings of BioEM2009, 11-2, June.
- Negishi T, Imai S, Shibuya K, Nishimura I and Shigemitsu T [2008], "Lack of promotion effects of 50 Hz magnetic fields on 7, 12-dimethylenz (a) anthracene-induced malignant lymphoma/ lymphatic leukemia in mice." Bioelectromagnetics, vol. 29, pp.29-38.
- Nishimura I., Imai T and Negishi T [2009], "Lack of chick embryotoxicity after 20 kHz, 1.1 mT magnetic field exposure," Bioelectromagnetics vol.30 (7), pp.573-582.
- Ogawa K, Nabae K, Wang J, Wake K, Watanabe S, Kawabe M, Fujiwara O, Takahashi S, Ichihara T, Ramano S and Shirai T [2009], "Effects of gestational exposure to 1.95-GHz W-CDWA signals for IMT-2000 cellular phones: lack of embryotoxicity and teratogenicity in rats." Bioelectromagnetics, vol. 30, pp.205-212.

- Okano, T., Y. Terao, T. Furubayashi, Y. Mizuno, A. Yugeta, A.Y. Simba, K. Wake, S. Watanabe and Y. Ugawa [2008], "Effect of thirty-minute mobile phone use on the antisaccade task", BEMS2008, P-60, p. 327-328.
- Okano H, Tomita N and Ikada Y [2008a], "Spatial gradient effects of 120 mT static magnetic field on endothelial tubular formation in vitro." Bioelectromagnetics, vol. 29, pp.233-236.
- Okano H, Kitahara H, Akai D and Tomita N [2008b], "The influence of a gradient static magnetic field on an unstirred Belousov-Zhabotinsky reaction." Bioelectromagnetics, vol. 29, pp.598-604.
- Okano H, Kitahara H and Akai D [2009], "Effect of a gradient static magnetic field on an unstirred Belousov-Zhabotinsky reaction by changing the thickness of the medium." Journal of Physical Chemistry, vol.113 (13), pp.3061-3067.
- Onishi, T., K. Kiminami, and T. Iyama [2008a], "Novel Specific Absorption Rate Measurement Techniques," EMC-in-Singapore 2008, TU-BIO-1-3, May.
- Onishi, T., K. Kiminami and T. Iyama [2008b], "Exclusion Procedure with Respect to SAR Measurement for Simultaneous Multi-Band Transmission Assessment," Proceedings of the Bioelectromagnetics Society the 30th Annual Meeting (BEMS2008), P-26, June.
- Onishi, T., T. Iyama, L. Hamada, and S. Watanabe [2009] "SAR and Temperature elevation Using Japanese anatomical human models for Body-worn Usage," Proceedings of the BioEM2009, P-82, June.
- Owada, G., F. Sato, H. Matsuki, T. Nonaka and T. Sato [2008], "Examination of the Optimum Arrangement of Magnetic Sensors for Nondestructive Crack System in Distribution Line," JOURNAL OF APPLIED PHYSICS, vol.103, 07E934.
- Owada, G., T. Nonaka, F. Sato, H. Matsuki and T. Sato [2009], "Examination of the Detection Parameter for a Nondestructive Crack Detection System for Distribution Lines (in Japanese with English summary)," Journal of the Magnetics Society of Japan, vol.33, pp.279-282.
- Saito, H., T. Nagaoka, S. Kikuchi, K. Saito, S. Watanabe, M. Takahashi and K. Ito [2008], "The Japanese Models and Their Application to Radiation Dosimetry in Diverse Conditions", Handbook of Anatomical Models for Radiation Dosimetry.
- Sakai, T., M. Kojima, Y. Miyota, Y. Yamashiro, K. Sasaki, H. Sasaki, S. Watanabe and K. Sato [2009], "Development of measurement system for MMW exposure to an eye of a rabbit", BioEM2009, P-192.
- Sakurai, T., S. Terashima, and J. Miyakoshi [2008a], "Enhanced secretion of prostaglandin E2 from osteoblasts by exposure to a strong static magnetic field," Bioelectromagnetics, vol. 29, pp. 277-283.
- Sakurai T., M. Yoshimoto, S. Koyama and J. Miyakoshi [2008b], "Exposure to extremely low frequency magnetic fields affects insulin-secreting cells," Bioelectromagnetics, vol. 29, pp. 118-124.
- Sakurai, T. and J Miyakoshi [2008c], "Strong static magnetic fields affect insulin-secreting cells," The proceedings of the Bioelectromagnetics Society 30th Annual Meeting, 6-3, pp. 98-99, June.
- Sakurai, T., T. Kiyokawa and J. Miyakoshi [2008d], "Extremely low frequency magnetic fields enhance cytokine-mediated beta-cell dysfunction," Proceedings of the XXIX General Assembly of the International Union of Radio Science (URSI), K02b.10, August.
- Sakurai, T., S. Terashima and J. Miyakoshi [2009a], "Effects of strong static magnetic fields used in magnetic resonance imaging on insulin-secreting cells," Bioelectromagnetics, vol. 30, pp. 1-8.
- Sakurai, T., T. Ueda, M. Kawai, H. Tobita and J. Miyakoshi [2009b], "Protective effects of insulin-like growth factor-I on the decrease in myogenic differentiation by ionizing radiation" International Journal of Radiation Bioloy, vol. 845, pp. 153-158.
- Sakurai, T., T. Kiyokawa and J. Miyakoshi [2009c], "The effects of strong static magnetic fields

on astrocyte differentiation," The proceedings of BioEM2009, P-146, June.
- Sakurai, T., T. Kiyokawa and J. Miyakoshi [2009d], "The effects of extremely low frequency magnetic fields on adipogenesis," The proceedings of BioEM2009, P-148, June.
- Salama N., Kishimoto T and Kanayama HO [2009], "Authors response on letter to the editor on 'Effects of exposure to a mobile phone on testicular function and structure in adult Rabbit' by Salama et al," Int J Androl
- Sano M, Tanaka K, Uchikawa Y, Sakurai S, Watanabe T, Kim BS and Kobayashi K [2009], "Discriminating multiple source components of magnetoencephalogram by time-frequency analysis (in Japanese with English summary)." Journal of the Magnetic Society of Japan, vol.33, pp.341-346.
- Sato H, Arimatsu T, Ueno S, Ge S, Hayami T and Iramina K [2008], "Differences in evoked EEG by transcranial magnetic stimulation (in Japanese with English summary)." Journal of the Magnetic Society of Japan, vol.32, pp. 495-498.
- Sato, T., F. Sato, H. Matsuki and T. Sato [2008], "Prototype Charger System with Low Heating Levels for Cardiac Pacemaker (in Japanese with English summary)," Journal of the Magnetics Society of Japan, vol.32, pp.29-35.
- Sato, F., K. Shinohe, T. Takura, H. Matsuki, S. Yamada and T. Sato [2009], "Development of Wireless Communication System in real-time Internal Dose Measurement System," JOURNAL OF APPLIED PHYSICS, vol.105, 07B319.
- Sekino M., Ohsaki H, Yamaguchi-Sekino S, Iriguchi N and Uneo S [2009], "Low-frequency conductivity tensor of rat brain tissues inferred from diffusion MRI," Bioelectromagnetics vol.30, pp.489-499
- Shigemitsu T, Negishi T, Yamazaki K, Kawahara Y, Haga A, Kobayashi K and Muramatsu K [2009], "A newly designed and constructed 20 kHz magnetic field exposure facility for in vivo study." Bioelectromagnetics, vol. 30, pp.36-44.
- Shimizu. HO. and Shimizu K. [2009], "Fundamental Study on Body Hair Movement in ELF Electric Field Exposure", Proceedings of EMC'09 Kyoto, pp.389-392.
- Shinohe, K., T. Takura, F. Sato, H. Matsuki, S. Yamada and T. Sato [2008], "Signal Transmission in Real-Time Internal Radiation Dose Measurement System Using Magnetic Fields," IEEE Trans. Magn., vol.44 no.11, pp.4456-4459.
- Shinohe K., T. Takura, F. Sato, H. Matsuki, S. Yamada, and T. Sato [2009], "Basic Evaluation of Signal Transmission in a Real-Time Internal Radiation Dose Measurement System (in Japanese with English summary)," Journal of the Magnetics Society of Japan, vol. 33, pp.337-340.
- Shirai, T., M. Kawabe, K. Wake, J. Wang, H. Kawai, S. Watanabe, K. Nabae, N. Imai, O. Fujiwara and S. Tamano [2008], "Lack of adverse effects of whole-body exposure to a 2.14 GHz W-CDMA electromagnetic field used in cellular phones during the gestational and actational period on physical and functional development of the rat fetus", BEMS2008, P-1, pp.205-207.
- Simba, A.Y., Y. Takahashi, S. Watanabe, T. Arima and T. Uno [2008a], "Dependence of the Induced Current of the Liquid-type Human-body Equivalent Antenna on Its Height", PIERS2008, pp. 450-451.
- Simba, A.Y., T. Hikage, S. Watanabe and T. Nojima [2008b], "The effect of reflected electromagnetic field from elevator walls on the sar of a mobile-phone user: -comparison between sar in an adult and children", BEMS2008, pp. 283-286.
- Simba, A.Y., T. Nagaoka, T. Hikage, S. Watanabe and T. Nojima [2008c], "The specific absorption rate in a fetus caused by a mobile phone in proximity to metallic walls using a pregnant woman model", 5th International Workshop on Biological Effects of Electromagnetic Fields.
- Simba, A.Y., S. Watanabe, T. Hikage and T. Nojima [2008d], "Measurement of the Maximum

SAR in a Spherical Phantom When Operating a Mobile Phone Near a Metallic Wall", First International Symposium on Applied sciences in Biomedical and Communication Technologies (ISABEL) 2008.

- Simba, A.Y. [2008e], "Research of Biomedical EMC", Supercomputing 2008.
- Simba, A.Y., T. Hikage, S. Watanabe and T. Nojima [2009a], "Effect of Passive RF-exposure from Mobile Phones on the SAR and Absorbed Power of Passengers in an Elevator at 900MHz", PIERS2009, p. 193.
- Simba, A.Y., T. Hikage, S. Watanabe and T. Nojima [2009b], "Specific Absorption Rates of Anatomically Realistic Human Models Exposed to RF Electromagnetic Fields From Mobile Phones Used in Elevators", IEEE Transactions on Microwave Theory and Techniques, Vol. 57, No. 5, pp. 1250-1259.
- Simba, A.Y., T. Hikage, S. Watanabe and T. Nojima [2009c], "Measurement of Maximum SAR in a Spherical Phantom When Using an Actual Mobile Phone in Close Proximity to a Metallic Wall", BioEM2009.
- Simba, A.Y., T. Hikage, S. Watanabe and T. Nojima [2009d], "A Study of Passive Radiofrequency Exposure Caused by Mobile Phones in Elevators Using an Anatomically Realistic Human Model", IEEE Transactions on Microwave Theory and Technique.
- Simba, A.Y., S. Watanabe, T. Hikage and T. Nojima [2009e], "A Review of Mobile Phone Usage in Enclosed Areas and RF Safety Guideline", IEEE Africon 2009.
- Simba, A.Y., S. Watanabe, T. Hikage and T. Nojima [2009f], "Experimental and Numerical Investigation of the Maximum Specific Absorption Rates When Operating a Mobile Phone Near a Metallic Wall", IEEE Transactions on Electromagnetic Compatibility
- Soda A, Ikehara T, Kinouchi Y and Yoshizaki K [2008], "Effect of exposure to an extremely low frequency-electromagnetic field on the cellular collagen with respect to signaling pathway in osteoblast-like cells." Journal of Medical Investigation, vol.55, pp.267-278.
- Suzuki, Y., Ikehata, M. and Yanagisawa, H. [2009], "Effect of static magnetic fields on the induction of micronuclei in mice.-A possible mechanism, 10th International conference on environmental mutagens, MH025, p.237, Aug.
- Takahashi, T. and Wang, J., [2008], "On-site SAR estimation based on spatial impulse response of scattered field (in Japanese)," Trans. IEICE, vol.J91-B(8), pp.877-880.
- Takahashi, Y., A.Y. Simba, S. Watanabe, T. Arima and T. Uno [2008], "Human-body equivalent antennas for evaluating induced ankle currents of adult males and females and children in VHF band", EMCJ2007, No. 106
- Takebayashi T, Versier N, Kikuchi Y, Wake K, Taki M and Watanabe S [2008], "Mobile phone use, exposure to radiofrequency electromagnetic field, and brain tumour: a case-control study." British Journal of Cancer, vol. 98, pp.652-659.
- Takeuchi A, Moriguchi H, Kotani K, Lee JK, Noshiro M and Jimbo Y [2009], "Development of semi-separated co-culture system for electrical stimulation and extracellular recording of sympathetic neuron and cardiomyocyte (in Japanese with English summary)." IEEJ Trans. EIS, Vol.129 (7), pp.1225-1230.
- Taki, M. and S. Watanabe [2008], "RF sources - why are cell phones special?", 6th International Non-Ionizing Radiation Workshop of International Commission on Non-Ionizing Radiation Protection (ICNIRP NIR-WS)
- Takura T., F. Sato, H. Matsuki and T. Sato [2008a], "Evaluation of Thermosensitive Magnetic Powder Coated with Ag-paste for Cancer Therapy," JOURNAL OF APPLIED PHYSICS, vol.103, 07A305.
- Takura, T., F. Sato, H. Matsuki, T. Fujimura, S. Aiba and T. Sato [2008b], "Inhibitory Effect of Tumor (murine B16 melanoma) by Self-control Heater for Hyperthermia," Journal of the Magnetics Society of Japan, vol.32, pp.439-443.
- Takura, T., F. Sato, H. Matsuki and T. Sato [2009], "Analysis of Complex Type of Heat Particles

for Hyperthermia (in Japanese with English summary)," Journal of the Magnetics Society of Japan, vol. 33, pp.150-153.

- Tanaka, T., G. Tsurita, S. Watanabe, K. Wake, H. Kawai, S. Ueno and H. Nagawa [2008], "Single exposure to 1439MHz pulsed tdma filed does not affect glial cells: a time dependent study", BEMS2008, P-133, p.475-476.
- Tanaka K., Mizuno Y and Naito K [2009], "Quantification of low frequency magnetic fields generated by household appliances," IEEJ vol.129(9), pp.627-632 (in Japanese)
- Terashima, S., R. Yamauchi, T. Sakurai, T. Nakahara and J. Miyakoshi [2007], "Morphological changes of cultured cells by the medium convection under strong static magnetic fields," Bulletin of Health Sciences Hirosaki, vol. 6, pp. 115-120.
- Tarusawa, Y. and S. Watanabe [2008], "Comments on measurement points specified in K.61rev", ITU-T/SG5, COM5-C64-E.
- Tarusawa, Y. and S. Watanabe [2009], "Time variation of electromagnetic field strength radiated from IMT-2000 base station antenna", ITU-T/SG5.
- Togashi, T., T. Nagaoka, S. Kikuchi, K. Saito, S. Watanabe, M. Takahashi and K. Ito [2008], "FDTD Calculations of Specific Absorption Rate in Fetus Caused by Electromagnetic Waves From Mobile Radio Terminal Using Pregnant Woman Model", IEEE Transactions on Microwave Theory and Techniques, Vol. 56, No. 2, pp. 554-559.
- Tokuhara Y., F. Sato, H. Matsuki and T. Sato [2008], "Examination to Improve Transmissible Range in the Transcutaneous Energy Transmission System for the Artificial Heart (in Japanese with English summary)," Journal of the Magnetics Society of Japan, vol.32, pp.430-433.
- Tsuyama S., Katayama Y, Hyodo A, hayami T, Ueno S and Iramina K [2009], "Effects of coil parameters on the stimulated area by transcranial magnetic stimulation," IEEE Trans on Mag vol.45 (10) pp.4845-4848
- Ushiyama, A., K. Miyawaki , H. Yamashita, A. Yasuda, K. Fujii, M. Nishikawa, T. Furubayashi , Y. Mizuno, R. Hanajima, Y. Terao, M. Taki, K. Wake, A.Y. Shimba and S. Watanabe [2008], "Questionnair survey on the mobile phone use and subjective health symptoms in Japan", BEMS2008, P-61, pp.328-330.
- Usui, D., T. Arima, S. Watanabe and T. Uno [2009], "A Study on Exposure System with Double Negative Material Lens at 3.4 GHz Band", BioEM 2009.
- Varsier, N., K. Wake, M. Taki, S. Watanabe, T. Takebayashi, N. Yamaguchi and Y. Kikuchi [2008a], "SAR characterization inside intracranial tumors for case-control epidemiological studies on cellular phones and RF exposure", Annales Des Telecommunications-Annals of Telecommunications, Vol. 63, pp. 65-78.
- Varsier, N., K. Wake, M. Taki and S. Watanabe [2008b], "Influence of Use Conditions and Mobile Phone Categories on SAR Distributions in Different Anatomical Structures in the Brain", 2008 URSI General Assembly, KP2p6.
- Varsier, N., K. Wake, M. Taki, S. Watanabe, E. Cardis, J. Wiart and N. Yamaguchi [2008c], "Categorization of Mobile Phones for Exposure Assessment in Epidemiological Studies on Mobile Phone Use and Brain Cancer Risk", IEEE Transactions on Microwave Theory and Techniques, Vol. 56, No. 10, pp. 2377-2384.
- Varsier, N., K. Wake, M. Taki and S. Watanabe [2008d], "Effect of Heterogeneity of Tissues on RF Energy Absorption in the Brain for Exposure Assessment in Epidemiological Studies on Mobile Phone Use and Brain Tumors", IEICE Transactions on Communications, E91-B, No. 11, pp.3792-3795
- Wake K., Varsier N, Watanabe S, Taki M, Wiart J and Mann S [2009], "The estimation of 3D SAR distributions in the human head from mobile phone compliance testing data for epidemiological studies," Phys Med Biol, vol. 54 (19), pp.5695-5706.
- Wang J, Fujiwara O, Kawai H, Wake K and Watanabe S [2008a], "Development and dosimetry

analysis of a 2-GHz whole-body exposure setup for unstrained pregnant and newborn rats." IEEE Trans on MTT, vol. 56 (8), pp.2008-2013.

- Wang, J., Fujiwara, O., Wake, K. and Watanabe, S. [2008b], "Dosimetry evaluation for pregnant and fetus rats in a near-field exposure system of 1.95-GHz cellular phones," IEEE Microwave Wireless Comp. Lett., vol.18 (4), pp.260-262.
- Wang, J., Tayamachi, T. and Fujiwara, O., [2008c] "Amplitude probability distribution measurement for electric field intensity assessment of cellular-phone-base stations," IEEE Trans. Electromagn. Compat., vol.50 (3), pp.736-739.
- Wang, Q. and Wang, J. [2009a], "SA and SAR analysis for wearable UWB body area applications,," IEICE Trans. Commun., vol.E92-B (2), pp.425-430.
- Wang, J., Y. Nishikawa and T. Shibata [2009b] "Analysis of on-body transmission mechanism and characteristic based on an electromagnetic field approach," IEEE Trans. Microwave Theory Tech., vol.57 (10), pp. 2464-2470.
- Wang, Q., T. Tayamachi, I. Kimura and J. Wang [2009c], "An on-body channel model for UWB body area communications for various postures," IEEE Trans. Antennas Propagt. vol.57 (4), pp.991-998.
- Watanabe, T., N. Ikarashi, N. Ishii, K. Sato, L. Hamada and S. Watanabe [2008], "Gain measurement of sandwiched dipole antenna in the tissue equivalent liquid at 5.2GHz", act2008-12, pp.12-18.
- Watanabe, T., N. Ikarashi, N. Ishii, K. Sato, L. Hamada and S. Watanabe [2009a], "Far-Field Gain Estimation of Sandwiched Dipole Antenna in Tissue Equivalent Liquid at 5.2GHz", EMC09, 22S1-4, p. 321-324.
- Watanabe Y., Sato K, Yukumi S, Yoshida M, Yamamoto Y and Doi T [2009b], "Development of a second-generation radiofrequency ablation using sintered MgFe2O4 needles and alternating magnetic field for human cancer therapy," Biomed Mater Eng, vol.19(2), pp.101-110.
- Yamazaki K., A. Hirata, S. Hamada, Y. Kamimura, H. Tarao, K. Wake, Y. Suzuki, N. Hayashi and O. Fujiwara [2009], "Intercomparison of Induced Fields in Japanese Male Model TARO Due to Magnetic Field Exposures," 2009 International Symposium on Electromagnetic Compatibility, Kyoto (EMC'09 Kyoto), July.
- Yanamoto H, Miyamoto S, Nakajo Y, Nakano Y, Hori T and Naritomi H [2008], "Repeated application of an electric field increases BDNF in the brain, enhances spatial learning, and induces infarct tolerance." Brain Research, vol.1212, pp.79-88.
- Yoshie, S., M. Ikehata, N. Hirota, T. Takemura, T. Minowa, N. Hanagata and T. Hayakawa [2007], "Effects of static magnetic field on *Escherichia coli* deficient in superoxide dismutase," International Conference on Magneto-Science ICMS2007, IIP-21, pp. 131, November.
- Yoshie, S., M. Ikehata, N. Hirota, T. Takemura, T. Minowa, N. Hanagata and T. Hayakawa [2008a], "Effects of strong static magnetic field up to 13 T on mutagenicity in SOD-deficient E. coli cells," Proceedings of the Bioelectromagnetics Society the 30th Annual Meeting (BEMS2008), P-92, pp. 384-385.
- Yoshie, S., M. Ikehata, N. Hirota, T. Takemura, T. Minowa, N. Hanagata and T. Hayakawa [2008b], "Mutagenicity and Co-mutagenicity of Static Magnetic Field in SOD-deficient Escherichia coli," IRPA12, p. 924, October.
- Yoshie, S., M. Ikehata, A. Saito, S. Hiromoto, Y. Suzuki, T. Hayakawa and M. Taki [2008c], "Is there athermal RF effects? Evaluation of temperature sensitivity on hsp81 gene regulation in budding yeast and possible effects of 2.45GHz RF electromagnetic field exposure," 6th international NIR workshop of ICNIRP, p10, October.
- Yoshie, S., M. Ikehata, A. Saito, S. Hiromoto, Y. Suzuki, T. Hayakawa and M. Taki [2009], "Evaluation of the Effect of 2.45 GHz Radiofrequency Electromagnetic Field on the Thermal Tolerance of Saccharomyces cerevisiae," Proceedings of the BioEM2009, P-147, June.