Commission K (Electromagnetics in Biology & Medicine) Activity Report
November, 2010
by
Tsukasa Shigemitsu

1. Meetings

(a) Past 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) 2010, 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

(b) Future meetings

(1) 5th course: "Medical applications of electromagnetic fields". 22-23 November 2010, Erice (Sicily), Italy (http://www.ebea.org/ebea_schol_2010.htm)

(2) 10th EBEA International Congress, February 21-24, 2011, Rome, Italy
(http://www.ebea.org/ebea_2011.htm)

(3) 29th Progress in Electromagnetics Research Symposium (PIERS)
(http://piers.org/piers2011Marrakesh)

(4) International Conference on non-ionizing radiation and children's health, 18-20 May, 2011, Ljubljana, Slovenia (http://wwwincirp.org/Kids/kids&NIR2010a.htm).

(5) 33th BEMS Annual Meeting, June 12-17, 2011, Halfax, Nova Scotia, Canada

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

(7) 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)

(8) XXXth URSI GA and Scientific Symposium, Istanbul, Turkey, 13-20. August, 2011.
(http://www.ursiga2011.org/)

(9) 7th ICNIRP International NIR Workshop. 9-11, May, 2012.

2. Publications

・ 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., Nagaoka T., Kikuchi S., Saito K., Watanabe S., Takahashi M., and Ito K. [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." Proceedings of the International Workshop on Antenna Technology 2008, pp. 223-226.
- Akimoto S., Nagaoka T., Kikuchi S., Saito K., Watanabe S., Takahashi M., and Ito K. [2008b], "SAR calculations for pregnant woman with her fetus and placenta in various positions exposed to EM waves from wireless terminal." Book of Abstract on European Electromagnetics 2008, p. 167.
- Akimoto S., Kikuchi S., Saito K., Takahashi M., and Ito K. [2009a], "SAR evaluation in human body exposed to EM wave from NHA with metallic case." IEICE Electronics Express, vol. 6, no. 8, pp. 477-482.
- Akimoto S., Kikuchi S., Saito K., Takahashi M., and Ito K. [2009b], "SAR calculation using numerical human model exposed to EM wave from commercial wireless terminal at 150 MHz." Proceedings of 2009 International Symposium on Electromagnetic Compatibility, pp. 385-388.
- Akimoto S., Kikuchi S., Saito K., Nagaoka T., Watanabe S., Takahashi M., and Ito K. [2009c], "SAR calculation in a fetus exposed to EM wave from a wireless radio terminal close to the abdomen of a pregnant woman." Proceedings of the 2009 International Symposium on Antennas and Propagation, pp. 1607-1070.
- Akimoto S., Nagaoka T., Kikuchi S., Saito K., Watanabe S., Takahashi M., and Ito K. [2010], "Calculations of specific absorption rate for various fetal presentations in a pregnant woman using a commercial portable radio." Proceedings of 2010 IEEE AP-S International Symposium and CNC-USNC/URSI Radio Science Meeting.
- Akimoto S., Nagaoka T., Saito K., Watanabe S., Takahashi M., and Ito K. [2010b], “Comparison of SAR in realistic fetus models of two fetal positions exposed to electromagnetic wave from business portable radio close to maternal abdomen,” 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, pp. 734-737, Buenos Aires, Argentina, Sep.
- Akimoto S., Nagaoka T., Saito K., Watanabe S., Takahashi M., and Ito K. [2010c], “SAR calculations for fetus exposed to EM wave from business portable radio close to abdomen of pregnant woman,” Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), KBC-5, Toyama, Sep.
- Aoyagi Y., Saito K., Horita H., Ito K., Tanaka H., Tatsuno S., Miida K., Shimizu S., and Kanehira C. [2008], "Microwave interstitial hyperthermia with ablation concept - Based on the heating and clinical results of five cases -." Thermal Medicine, vol. 24, no. 3, pp. 101-111.
- Cespedes O and Ueno S [2009], “Effects of radio frequency magnetic fields on iron release from cage proteins.” Bioelectromagnetics, vol. 30, pp.336-342.
- 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 Y, Inoue S and Omori H [2010], “Development of a higher-power intermediate-frequency magnetic field exposure system for in vitro studies,” Bioelectromagnetics, vol.31, pp.156-162.
- 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

- 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.
- Goto M, Moriguchi H, Saito A, Takayama Y, Kotani K, and Jimbo Y [2010a], “The measurement of neuronal-network activity using "Micropipette drawing".” 7th FENS Forum, Amsterdam, July.
- Goto M, Moriguchi H, Takayama Y, Saito A, Kotani K, and Jimbo Y [2010b], “Recordings of electrical activity in neuronal network patterned on MEA using Micropipette drawing method.” 7th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Hamada, R., T. Iyama, T. Onishi and S. Watanabe [2009a], “A Corner-Rounded Flat Phantom for the Compliance Test for Mobile Phones,” Proceedings of the BioEM2009, P-56, June.
- Hamada R, T. Iyama, T. Onishi and S. Watanabe [2009b] “The Specific Absorption Rate of Mobile Phones Measured in a Flat Phantom and in the Standardized Human Head Phantom” EMC09 21S4-1 p.245 to 247, July.
- Hattori S, Suzurikawa J, Kanzaki R, Jimbo Y, Hamaguchi T, Takahashi H, and Nakao M [2008], “Direction Control of Information Transfer between Neuronal Populations with Asymmetric Three-Dimensional Microstructure (in Japanese with English summary).” IEEJ Trans. EIS, Vol. 128, pp. 1036-1042.
- 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., T. Onishi, and Y. Tarusawa [2009a], “RF Fields Strength Measurement Method for Evaluation of Human Exposure in Modern Radio Frequency Spectrum Use,” Proceedings of the BioEM2009, P-182, June.
- Higashiyama J. and Tarusawa Y. [2009b], “Electric field distribution excited from indoor radio source for exposure compliance assessment,” EMC’09/Kyoto, 22S4-1, July
- Higashiyama J., T. Onishi, and Y. Tarusawa [2010a], “RF field strength from cellular base station in recent radio environments for human exposure assessment,” Proceedings of the BioEM2009, P-B-57, June.
- Higashiyama J. and Tarusawa Y [2010b], “Electric field distribution excited by indoor radio source for exposure compliance assessment,” IEICE Trans. Commun., vol. E93-B, no. 7, pp. 1834 – 1838, July 2010.
- Higashiyama J. and Tarusawa Y [2010c], “Electric field distribution from sector-configuration mobile base station antenna system for human RF exposure assessment,” EMC Europe 2010, Wroclaw, Poland, pp. 463 – 366, Sept.
- Hirata A., S. Watanabe, M. Taki, O. Fujiwara, M. Kojima, and K. Sasaki [2008a] “Computation of temperature elevation in rabbit eye irradiated by 2.45-GHz exposure systems”, Health Physics, vol.94, no.2, pp.134-144
- Hirata A, Sugiyama H, Kojima M, Kawai H, Yamashiro Y, Fujiwara O, Watanabe S, and Sasaki K [2008b] “Computational model for calculating body-core temperature elevation in rabbits due to whole-body exposure at 2.45 GHz” *Phys. Med. Biol.*, vol.53, pp.3391-3403.
- Hirata A, Asano T, and Fujiwara O [2008c] “FDTD analysis of body-core temperature elevation in children and adults for whole-body exposure” *Phys. Med. Biol.*, vol.53, pp.5223-5238.
- Hirata A, Shirai K, and Fujiwara O [2008d] “On averaging mass of SAR correlating with temperature elevation due to a dipole antenna” Prog Electromagnet Res, vol.84, pp.221-237.
- Hirata A, Ito N, Fujiwara O, Nagaoka T, and Watanabe S [2008e] “Conservative estimation of

- Hirata A and Fujiwara O [2009a], “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, Ito N, and Fujiwara O [2009b] “Influence of electromagnetic polarization on whole-body averaged SAR in children for plane-wave exposures” Phys Med Biol, vol.54, pp.N59-N65.
- 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.
- Hirata A, Sugiyama H, and Fujiwara O [2009d] “Estimation of core temperature elevation in humans and animals for whole-body averaged SAR” *Progress in Electromagnetic Research*, vol.99, pp.221-237.
- Hirata A and Fujiwara O [2009e] “Correlation between mass-averaged SAR and temperature elevation in human head model exposed to RF near-fields from 1 to 6 GHz” Phys Med Biol, vol.54, pp.7227-7238.
- Hirata A, O. Fujiwara, T. Nagaoka, S. Watanabe[2009f] “Estimation of Whole-Body Averaged SARs in Human Models for Far-Field Exposures in Whole-Body Resonance and GHz Frequency Regions” EMC09 21S1-4 p.69 to 72 , Jul.
- Hirata H, Ishii T, Okita Y, and Sugiura T [2010a], “Validity of Inverse Coupler to Improve Temperature Resolution of One-band Microwave Radiometer for Non-invasive Brain Temperature Monitoring,” Proceedings of PIERS, pp.1493-1495, March.
- Hirata A, Fujiwara O, Nagaoka T, and Watanabe S. [2010b] “Estimation of whole-body average SAR in human models due to plane-wave exposure at resonance frequency” IEEE Trans on Electromagnet. Compat., vol.52, no.1, pp.41-48.
- Hirata A., K. Yamazaki, S. Hamada, Y. Kamimura, H. Tarao, K. Wake, Y. Suzuki, N. Hayashi, and O. Fujiwara [2010c]: "Intercomparison of induced fields in Japanese male model for ELF magnetic field exposures: effect of different computational methods and codes", Radiational Protection Dosimetry, vol.138, no.3, pp.237-244
- Hirata A, H. Sugiyama, M. Kojima, H. Kawai, Y. Yamashiro, S. Watanabe, H. Sasaki, and O. Fujiwara [2010d] “Acute dosimetry and estimation of thresholds inducing behavioral sign of thermal stress for 2.45-GHz microwave exposure in rabbits,” IEEE Transactions on Biomedical Engineering, vol.57, no.5, pp.1234-1242
- Hirata A, Y. Takano, Y. Kamimura and O. Fujiwara [2010e] “Effect of averaging volume and algorithm on in-situ electric field for uniform electric and magnetic field exposures” Phys. Med. Biol., vol.55, pp.N243-252.
- 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, 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.
- Hirota S, Okamoto H, Takayama Y, Moriguchi H, Kotani K, and Jimbo Y [2008], “Study of in vitro reconstruction of visual information processing system.” 3rd Int. Symp. Biomed. Engng., Bangkok, November.
- Hirota S, Matsuura M, Masuda H, Ushiyama A, Wake K, Watanabe S, Taki M and Ohkubo C [2009a] “Direct observation of microcirculatory parameters in rat brain after local exposure to radio-frequency electromagnetic field”. The Environmentalist, vol.29, pp.186-189.
- Hirota S., Moriguchi H., Takayama Y, and Jimbo Y [2009b], “In vitro Reconstruction of Visual

- 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.
- 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.
- 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, pp. 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), p. 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, K. Wada, Y. Suzuki, S. Yoshie, T. Sakai, K. Wake, S. Nakasono, M. Taki, C. Ohkubo [2010] "Development of exposure system of intermediate frequency magnetic fields for in vitro test systems", Proceedings of the BEMS2010, P-B-133, June.
- Ikehata M, K. Wada, Y. Suzuki, S. Yoshie, T. Sakai, K. Wake, S. Nakasono, M. Taki, C. Ohkubo [2010] "Evaluation of genotoxic effects of intermediate frequency magnetic field in *in vitro* micronucleus assay using CHL/IU cells", Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), KP-2, Toyama, Sep.
- Ikehata M, S. Yoshie, Y. Ogasawara, K. Ishii, K. Wada, Y. Suzuki, T. Sakai, K. Wake, S.

- 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.
- 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 [2009a], “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.
- Iyama, T. and Onishi, T. [2009b], “SAR measurement procedure for multi-antenna transmitters,” EMC’09/Kyoto, 21S4-2, July.
- Iyama T. and Onishi T [2010a], “Applicability of SAR estimation method based on 2-D scanned E-fields to determine maximum average SAR for multi-antenna transmitters,” Proceedings of the Bioelectromagnetics Society the 32nd Annual Meeting, P-A-26, June.
- Iyama T. and Onishi T. [2010b], “Maximum average SAR measurement procedure for multi-antenna transmitters,” IEICE Trans. Commun., vol. E93-B, no. 7, pp. 1821 – 1825, July.
- Jimbo Y. [2007], “MEA-based recording of neuronal activity in vitro.” Arch. Ita. Biol. 145, pp. 289-297.
- 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", BEMS 30th Annual Meeting Abstract Collection, 8-3, pp.136-138, June.
- Kamimura Y., T. Furubayashi, Y. Terao, Y. Mizuno, R.Hanajima, T. Sakai, K. Wake, S. Watanabe, and Y. Ugawa [2009], "The threshold currents for perception determined by two different threshold tracking methods", Proceedings of BioEM 2009, P-126, June.
- Kamimura Y., A. Yamashita, T. Furubayashi, R. Hanajima, Y. Terao, T. Sakai, K. Wake, S. Watanabe, Y. Ugawa [2010], “The perception threshold for LF-MF band currents: comparison among three threshold tracking methods”, BEMS 32th Annual Meeting, Soul, Korea, P-B-94.
- Kamimura Y. [2010], “High speed calculation of induced current in human body exposed to uniform ELF magnetic fields”, Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), KAE-2, Toyama, Sep.
- 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) pp1-23.
- Kanezaki A, Hirata A, Watanabe S and Shirai H [2010], “Parameter variation effects on temperature elevation in a steady-state, one-dimensional thermal model for millimeter wave exppsrue of one-and three-layer human tissue. Phys Med Biol, vo.55, no.16, pp.4647-4659.
- 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. Watanabe, K. Saito, M. Takahashi, K. Ito [2009] “Computational dosimetry in embryos exposed to electromagnetic plane waves over the frequency range of 10

- Kawamura T., Saito K., Kikuchi S., 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, no. 10, pp. 2508-2514.
- Kikuchi S., Saito K., Takahashi M., Ito K., and Ikehira H. [2008a], "Calculation of temperature rise distribution in pregnant woman model exposed to RF pulses during MR imaging." Proceedings of the International Workshop on Antenna Technology 2008, pp. 354-357.
- Kikuchi S., Saito K., Takahashi M., Ito K., and Ikehira H. [2008b], "Numerical computation of temperature increase in pregnant woman model induced by electromagnetic absorption of MRI system." Book of Abstract on European Electromagnetics 2008, p. 355.
- Kikuchi S., Saito K., Takahashi M., Ito K., and Ikehira H. [2009a], "SAR computation inside fetus by RF coil during MR imaging employing realistic numerical pregnant woman model." IEICE Transactions on Communications, vol. E92-B, no. 2, pp. 431-439.
- Kikuchi S., Saito K., Takahashi M., Ito K., and Ikehira H. [2009b], "Numerical calculation on electromagnetic energy absorption in pregnant woman by RF coil for MRI system." Proceedings of 2009 International Symposium on Electromagnetic Compatibility, pp. 661-664.
- Kikuchi S., Saito K., Takahashi M., and Ito K. [2010], "Temperature elevation in the fetus from electromagnetic exposure during magnetic resonance imaging." Physics in Medicine and Biology, vol. 55, pp. 2411-2426.
- 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, no. 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.
- Kitagawa A, T.Hikage, T. Nojima, Simba Ally Yahaya, S. Watanabe [2009] "Large Scale FDTD Analysis for the Electromagnetic Field Distribution Estimations in Elevator using Precise Numerical Phantom Model" EMC09 p.517 to 520, Jul.2009
- 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., 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.

- Kotani K, Iida F, Akagawa T, Saitoh T, Jimbo Y, Kawaguchi Y, and Takamasu K [2007], "Development of the Method for Estimating Cardiac Vagal Activity in Real-Time during Body Motion and Generation of the Interactive CG (in Japanese with English summary)." IEEJ Trans. EIS, Vol. 127, pp. 1762-1769.
- Kotani K., Takamasu K., Jimbo Y, and Yamamoto Y. [2008], "Postural-induced phase shift of respiratory sinus arrhythmia and blood pressure variations - insight from respiratory-phase domain analysis." Am. J.Physiol. 294, pp. H1481-H1489.
- 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 [2008a], "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 [2008b], "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, S. Watanabe[2009]"Characterization of 60GHz Millimeter-Wave Focusing Beam for Living-Body Exposure Experiments" EMC09 22S1-1 p.309 to 312, Jul.2009
- Masuda H., Ushiyama A., Takahashi M., Wang J., Fujiwara O., Hikage T., Nojima T., Fujita K., Kudo M., and Ohkubo C. [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.
- Moriguchi H, Tamai N, Takayama Y, Kurashima T, and Jimbo Y [2008a], "Site-Selective Recording of Spontaneous Activity from Cultured Small Neuronal Circuits by Means of Spray-Patterning and a Mobile Microelectrode (in Japanese with English summary)." IEEJ

- Moriguchi H, Tamai N, Takayama Y, Kotani K, and Jimbo Y [2008b], “Extracellular Recording from Mass-produced Small Neuronal Networks using Mobile Metal Microelectrodes.” 6th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Moriguchi H, Tamai N, Takayama Y, Kotani K, and Jimbo Y [2008c], “Hierarchical oscillatory patterns observed in the spontaneous and evoked activity in cultured small recurrent networks.” 6th FENS Forum, Geneva, July.
- Moriguchi H, Tamai N, Takayama Y, Kotani K, and Jimbo Y [2008d], “Site-selective Stimulation and Recording of the Electrical Activity of Cultured Neuronal Networks using Mobile Microelectrodes.” Int. Symp. Biol. Physiol. Engng..January.
- Motomura T., Ueda K., Ohtani S., Hansen E., Ji L., Ito K., Saito K., Sugita Y., and Nose Y. [2010], "Evaluation of systemic external microwave hyperthermia for treatment of pleural metastasis in orthotopic lung cancer model." Oncology Reports, vol. 24, no. 3, pp. 591-598.
- 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 and S. Watanabe [2009a] “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, pp.942-945, September
- Nagaoka T and S. Watanabe [2009b] “Voxel-Based Variable Posture Models of Human Anatomy” Proceeding of the IEEE, vol.97, no.12, Nov.2009
- 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.
- 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 [2009] “Intermediate frequency magnetic fields did not have genotoxic potentials in mouse lymphoma assay (MLA),” Proceedings of the BioEM2009, P-152, June.
- Nakasono S, I. Nishimura, M. Ikehata, K. Yamazaki, T. Negishi [2010] “Intermediate frequency magnetic fields did not have genotoxic and promotion potentials in vitro, nor reproductive and developmental toxicity in vivo”, Proceedings of the BEMS2010, T-1-2, June.
- Nakasono S., M. Ikehata, K. Yamazaki, T. Negishi [2010], “Intermediated frequency magnetic fields did not have genotoxic and promotion potentials”, Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), KP-3, Toyama, Sept.
- 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/

- 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 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 [2009a] “SAR and Temperature elevation Using Japanese anatomical human models for Body-worn Usage,” Proceedings of the BioEM2009, P-82, June.
- Onishi, T., Iyama, T., and Kiminami, K. [2009b], “Faster specific absorption rate measurement techniques,” EMC’09/Kyoto, 21S1-6, June.
- Onishi, T., Iyama T., Hamada L., Watanabe S., and Hirata A. [2010], “Relationship between SAR and temperature elevation for body-worn devices,” Proceedings of the Bioelectromagnetics Society the 32nd Annual Meeting, P-A-43, 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.
- Rongen E., R.Croft, J. Juutilainen, I. Lagroye, J. Miyakoshi, R. Saunders, R. Seze, T. Tenforde, L. Verschaeve, B. Veyret and Z. Xu [2009] “Effects of radiofrequency electromagnetic fields on the human nervous system”. Journal of Toxicology and Environmental Health, vol.12, no.8, pp.572-97.
- Saito A, Takayama Y, Moriguchi H, Kotani K, Jimbo Y [2008], “Effects of ELFMF exposure on differentiation and spontaneous activity of P19EC-derived neuronal cells.” 3rd Int. Symp. Biomed. Engng., Bangkok, November.
- Saito A, Takayama Y, Moriguchi H, Kotani K, Jimbo Y [2009], “Developmental Effects of Low Frequency Magnetic Fields on P19-Derived Neuronal Cells.” 31st Ann. Int. IEEE EMBS Conf., Minneapolis, September.
- Saito A, Takayama Y, Moriguchi H, Kotani K, and Jimbo Y [2010a], “Effects of Extremely Low Frequency Magnetic Fields on Neuronal Development of P19 Embryonal Carcinoma Cells”. IEEJ Trans. in press.
- Saito A, Takayama Y, Moriguchi H, Kotani K, and Jimbo Y [2010b], “Evaluation of neuronal differentiation of P19EC cells after alternating current magnetic fields exposure.” 7th FENS Forum, Amsterdam, July.

- Saito A, Takayama Y, Moriguchi H, Kotani K, and Jimbo Y [2010c], “The Effects of AC Magnetic Fields on Neuronal Differentiation and Network Activities of P19EC Cells.” 7th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Saito A, Moriguchi H, Goto M, Saito A, Takayama Y, Kotani K, and Jimbo Y [2010d], “Electrical and Optical Recording of Interactions between Small Neuronal Networks using Needle-Type Microelectrodes.” 7th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Saito K., Kamimura T., Takahashi M., and Ito K. [2008a], "Evaluation on performances of microwave antenna with thermosensor for intracavitary thermal therapy." The 10th International Congress on Hyperthermic Oncology Scientific Program and Abstracts, p. 132.
- Saito K., Kamimura T., Takahashi M., and Ito K. [2008b], "Microwave antenna with thermosensor for intracavitary thermal therapy of bile duct carcinoma." Book of Abstract on European Electromagnetics 2008, p. 358.
- Saito K., Kawamura T., Takahashi M., and Ito K. [2008c], "Generation of controllable heating patterns by two types of thin microwave antennas for interstitial microwave thermal therapy." Proceedings of the 2008 International Symposium on Antennas and Propagation.
- Saito K., Kawamura T., Kikuchi S., Takahashi M., and Ito K. [2009], "SAR measurement of birdcage coil for MRI system using thermographic method." Bioelectromagnetics Society Annual Meeting, P-181.
- Saito K. and Ito K. [2010a], "Preliminary study of coagulation monitoring by antenna for treatment during microwave coagulation therapy." The Open Biomedical Engineering Journal, vol. 4, pp. 13-15.
- Saito K., Tsubouchi K., Takahashi M., and Ito K. [2010b], "Intracavitary microwave thermal therapy for bile duct carcinoma -Experimental evaluations on heating performances of antenna-." Proceedings of the International Workshop on Antenna Technology 2010.
- Saito K., Tsubouchi K., Takahashi M., and Ito K. [2010c], "Development of antenna for intracavitary microwave thermal therapy - Evaluations on heating characteristics of antenna using biological tissue -." Proceedings of 2010 IEEE AP-S International Symposium and CNC-USNC/URSI Radio Science Meeting.
- Saito K., Tsubouchi K., Takahashi M., and Ito K. [2010d], “Practical evaluations on heating characteristics of thin microwave antenna for intracavitary thermal therapy,” 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS 2010), pp.2755-2758, Buenos Aires, Argentina, Sep.
- 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”

- 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.
- Sakurai T., T. Kiyokawa, K. Kikuchi, J. Miyakoshi [2009e], “Intermediate frequency magnetic fields generated by an induction heating (IH) cooktop do not affect genotoxicities and expression of heat shock proteins”. International Journal of Radiation Bioloy, 85 (10):883-90
- Sakurai T., J. Miyakoshi [2009f] “Biological effects of strong static magnetic fields on insulin-secreting cells”. Journal of Physics: Conference Series, 156, 012014
- 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 K., Y. Kamimura, Y. Yamada [2009], “A Free Scanning Method for Measuring Magnetic Distributions Using Magnetic Tracker”, Int. Simposium on EMC, Kyoto, Japan, pp.85-88.
- Sato K., N. Miyata, Y. Kamimura and Y. Yamada [2010], “A Freehand Scanning Method for Measuring EMF Distributions Using Magnetic Tracker,” IEICE Trans. Commun., Vol. E93-B, No.7, pp.1865-1868.
- 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.
- 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.
- Simba AY, Hikage T, Watanabe S and Nojima T [2009a], “Specific absorption rates of anatomically realistic human models exposed to RF electromagnetic fields from mobile phones used in elevators.” IEEE Trans MTT, vol. 57 (5), pp.1250-1259.
- Simba AY, S. Watanabe, T. Hikage, T. Nojima [2009b], “A Review of Mobile Phone Usage in Enclosed Areas and RF Safety Guideline” IEEE, pp.1-6, Sep.2009
- Soda A, Ikehara T, Kinouchi Y and Yoshizaki K [2008], “Effect of exposure to an extremely low

- Sugiura T, Umehara N, Mizushina S, Hirata H [2009], "Improvement of the Confidence Interval Level of Multi-frequency Microwave Radiometer System for Measuring Deep Brain Temperature in New Born Infants," Proceedings of PIERS 2010, pp.1489-1492, March.
- Suzuki Y., K. Maruyama, K. Wake, S. Watanabe, M. Taki, O. Hashimoto [2009], "Computational Analysis on Induced Current Density and Electric Field in a Pregnant Woman Model Due to Intermediate Frequency Magnetic Fields" EMC09 21S3-3 p.189 to 192, Jul.2009
- Suzurikawa J, Takahashi H, Kanzaki R, Nakao M, and Jimbo Y [2007a], "Photoelectric Properties of a Light-Addressable Electrode with a Low-Conductive Passivation Layer and Spatial Resolution of the Light-Addressed Electrical Stimulation (in Japanese with English summary)." IEEJ Trans. EIS, Vol. 127, pp. 1581-1587.
- Suzurikawa J, Takahashi H, Kanzaki R, Nakao M, Takayama Y, and Jimbo Y [2007b], "Light-addressable electrode with hydrogenated amorphous silicon and low-conductive passivation layer for stimulation of cultured neurons." Appl. Phys. Lett. 90, 09390
- Suzurikawa J, Kanzaki R, Nakao M, Jimbo Y, and Takahashi H [2008a], "Optimization of Thin-Film Configuration for Light-Addressable Stimulation Electrode (in Japanese with English summary)." IEEJ Trans. EIS, Vol. 128, pp. 1043-1049.
- Suzurikawa J, Nakao M, Jimbo Y, Kanzaki R, and Takahashi H [2008b], "Characterization of Response Patterns Evoked by Light Addressed Electrical Stimulation in Cultured Neuronal Network." 6th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Suzurikawa J, Nakao M, Jimbo Y, Kanzaki R, and Takahashi H [2008c], "Light-addresable electrodes for probing functional neuronal networks in culture." Int. Symp. Biol. Physiol. Engng. January.
- Suzurikawa J, Nakao M, Jimbo Y, Kanzaki R, Takahashi H [2009], "Light-addressed stimulation under Ca^{2+} imaging of cultured neurons." IEEE Trans. BME 56, pp. 2660-2665.
- Takahashi S, N. Imai, K. Nabae, K. Wake, H. Kawai, J. Wang, S. Watanabe, M. Kawabe, O. Fujiwara, K. Ogawa, S. Tamano, T. Shirai [2009] "Lack of Adverse Effects of Whole-Body Exposure to a Mobile Telecommunication Electromagnetic Field on the Rat Fetus" RADIATION RESEARCH Vol.173 p.362 to 372, Dec.2009
- Takayama Y, Moriguchi H, and Jimbo Y [2007], "Activity Changes Induced by Spatio-Temporally Correlated Stimuli in Cultured Cortical Networks (in Japanese with English summary)." IEEJ Trans. EIS, Vol. 127, pp. 1619-1624.
- Takayama Y, Saito A, Moriguchi H, and Jimbo Y [2008a], "Developmental Activity Changes in P19EC-derived Neurons Cultured on Microelectrode Array." Int. Symp. Biol. Physiol. Engng. January.
- Takayama Y, Saito A, Moriguchi H, Kotani K, and Jimbo Y [2008b], "Neurons derived from P19 embryonal carcinoma cells establish functional neuronal network." 6th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Takayama Y, Saito A, Moriguchi H, Kotani K, and Jimbo Y [2008c], "Neurons derived from P19 embryonal carcinoma cells establish functional neuronal network." 6th FENS Forum, Geneva, July.
- Takayama Y, Moriguchi H, Kotani K, and Jimbo. Y [2009a], "Spontaneous calcium oscillations in cultured cortical networks during development." IEEE Trans. BME 56, pp. 2649-2956.
- Takayama Y, Saito A, Moriguchi H, Jimbo. Y [2009b], "Ensemble Stimulation of Embryoid Bodies using Substrate-Embedded Electrodes." IEEJ Trans. 4, pp. 734-735.
- Takayama Y, Saito A, Moriguchi H, Kotani K, and Jimbo Y [2009c], "Ensemble Recording of Electrical Activity in Neurons Derived from P19 Embryonal Carcinoma Cells (in Japanese with English summary)." IEEJ Trans. EIS, Vol. 129, pp. 8-16.
- Takayama Y, Moriguchi H, Saito A, Kotani K, Jimbo Y [2009d], "Ensemble Stimulation of

- Takayama Y, Moriguchi H, Kotani K, and Jimbo Y [2010a], “Spontaneous calcium transients in cultured cortical networks during development.” 7th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- Takayama Y, Moriguchi H, Saito A, Kotani K, and Jimbo Y [2010b], “Interaction of P19 cell-derived neuronal networks and mouse cortical networks co-cultured on micro-electrode array.” 7th FENS Forum, Amsterdam, July.
- Takayama Y, Moriguchi H, Saito A, Kotani K, and Jimbo Y [2010c], “Interactions of P19 cell-derived neuronal networks and mouse cortical networks co-cultured on microelectrode array.” 7th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- 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, Ogawa H, Moriguchi H, Lee J, Noshiro M, Kotani K, and Jimbo Y [2008], “Developmental Changes in Spontaneous Beating Rhythm of Cardiac Myocytes in vitro Cultured with Molecular Diffusion Culture Method (in Japanese with English summary).” IEEJ Trans. EIS, Vol. 128, pp. 1064-1070.
- Takeuchi A, Moriguchi H, Kotani K, Lee JK, Noshiro M and Jimbo Y [2009a], “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.
- Takeuchi A, Moriguchi H, Kotani K, Miwa K, Lee J, Noshiro M, and Jimbo Y [2009b], “Development of Semi-Separated Co-culture System of Sympathetic Neuron and Cardiomyocyte.” 31st Ann. Int. IEEE EMBS Conf., Minneapolis, September.
- Takeuchi A., Moriguchi H, Kotani K, Miwa K, Lee J, Noshiro M, and Jimbo Y [2010a], “Development of Spatially-Separated Co-culture System of the Sympathetic Neuron and the Cardiomyocyte.” IEEJ Trans. in press.
- Takeuchi A, Tani M, Mori M, Moriguchi H, Kotani K, Lee J, Noshiro M, and Jimbo Y [2010b], “Effects of Electrical Stimulation in Sympathetic Neuron-Cardiomyocyte Co-cultures (in Japanese with English summary).” IEEJ Trans. EIS, Vol. 130, pp. 1139-1144.
- Takeuchi A, Tani M, Mori M, Kotani K, Miwa K, Lee J, Noshiro M, and Jimbo Y [2010c]., “Effects of electrical stimulation in sympathetic neuron-cardiomyocyte co-cultures.” 7th FENS Forum, Amsterdam, July.
- Takeuchi A, Tani M, Mori M, Moriguchi H, Kotani K, Miwa K, Lee J, Noshiro M, and Jimbo Y [2010d], “Effects of electrical stimulation to sympathetic neuron-cadiomyocyte coculture.” 7th Int. Meeting on Substrate-Integrated Microelectrodes, Reutlingen, July.
- 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.
- Tamai N, Moriguchi H, Takayama Y, Jimbo Y, Suzuki I, and Yasuda K [2007], “Chaotropic Etching for Fabricating Microwells for Cell Culture (in Japanese with English summary).” IEEJ Trans. EIS, Vol. 127, pp. 1568-1574.
- Tanaka K., Mizuno Y and Naito K [2009], “Quantification of low frequency magnetic fields

- 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.
- Togashi T., Nagaoka T., Kikuchi S., Saito K., Watanabe S., Takahashi M., and Ito K. [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.
- Tonomura W, Kurashima T, Takayama Y, Moriguchi H, Jimbo Y, and Konishi S [2007], “The Electrophysiological MEMS Device with Micro Channel Array for Cellular Network Analysis (in Japanese with English summary).” IEEJ Trans. EIS, Vol. 127, pp. 1575-1580.
- Tonomura W, Moriguchi H, Jimbo Y, and Konishi S [2008], “Parallel Multipoint Recording of Aligned and Cultured Neurons on Corresponding Micro Channel Array Toward On-Chip Cell Analysis.” 30th Ann. Int. IEEE EMBS Conf., Vancouver, August.
- 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
- Uda, T., M. Tanaka, T. Kawano, Y. Kamimura, J. Wang, and O. Fujiwara [2009], "Monitoring of static magnetic field and variable electromagnetic fields in a large magnetic fusion plasma experimental facility", Proc. the 20th Zurich Int. Symp. on Electromagn. Compat., Zurich, Switzerland, pp.487-490.
- Uno Y., Saito K., Takahashi M., and Ito K., “Structure of cylindrical tissue-equivalent phantom for medical applications,” International Conference on Electromagnetics in Advanced Applications, pp.406-409, Sydney, Sep.
- Usui D., T. Arima, H. Kawai, K. Wake, S. Watanabe, T. Uno [2010] “Development of Tunable Head Local Exposure System for Rats Using Rectangular Loop Antenna in 3.4 GHz Band” 2010 International Workshop on Antenna Technology PS3.14, Mar.2010
- 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, no.8, pp.2008-2013.
- Wang J, O. Fujiwara, K. Wake and S. Watanabe [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, no.4, pp.260-262.
- Wang J., T. Tayamachi and O. Fujiwara [2008c], “Amplitude probability distribution measurement for electric field intensity assessment of cellular-phone-base stations,” IEEE Trans. Electromagn. Compat., vol.50, no.3, pp.736-739.
- Wang, Q and J. Wang [2009a], "SA and SAR analysis for wearable UWB body area applications," IEICE Trans. Commun., vol.E92-B, no.2, 425-430, Feb. 2009.
- Wang Q., T. Tayamachi, I. Kimura and J. Wang [2009b], “An on-body channel model for UWB body area communications for various postures,” IEEE Trans. Antennas Propagt. vol.57, no.4, pp.991-998, April 2009.
- Wang J., Y. Nishikawa and T. Shibata [2009], “Analysis of on-body transmission mechanism and characteristic based on an electromagnetic field approach,” IEEE Trans. Microwave

- Wang, Q and J. Wang [2010], "Performance of ultra wideband on-body communication based on statistical channel model," IEICE Trans. Commun., vol.E93-B, no.4, 833-841, April 2010.
- Watanabe R., Saito K., Watanabe S., Takahashi M., and Ito K. [2009], "Computation of interference voltage at a pacemaker due to electromagnetic wave from a mobile phone with a PIFA." Bioelectromagnetics Society Annual Meeting, P-70.
- Watanabe T, N. Ikarashi, N. Ishi, K. Sato, R. Hamada, S. Watanabe[2009] "Far-Field Gain Estimation of Sandwiched Dipole Antenna in Tissue Equivalent Liquid at 5.2GHz" EMC09 22S1-4 p.321 to 324 , Jul.
- Watanabe R., Saito K., Watanabe S., Takahashi M., and Ito K., "SAR evaluations of mobile phone close to a pacemaker implanted in human body," 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS 2010), pp. 3839-3842, Buenos Aires, Argentina, Sep.
- Watanabe Y., Sato K, Yukumi S, Yoshida M, Yamamoto Y and Doi T [2009], "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.
- Yamazaki, K. [2010], "Calculation of Induced Electric Field and Current in the Context of Compliance Testing with Guidelines for Human Exposure to Magnetic Field.", Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), KAE-1, Toyama, Sep.
- 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.
- Yonebayashi J., Takamatsu S., Saito K., Takahashi M., and Ito K. [2010], "Development of dynamic phantom for evaluation of breath detection Doppler radar." Bioelectromagnetics Society Annual Meeting, P-B-180.
- Yonebayashi J., Takamatsu S., Saito K., Takahashi M., and Ito K. [2010b], "Evaluation on performance of doppler radar for breath detection by dynamic phantom," Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), KB2-2, Toyama, Sep.
- 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, June.
- 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.

・ Yoshie, S., M. Ikehata, Y. Suzuki, K. Wada, C. Ohkubo, T. Hayalawa [2010], “Evaluation of biological effects of intermediate frequency magnetic field based on growth of DNA repair deficient mammalian cells and mutation assay”, Proceedings of the 2010 Asia-Pacific Radio Science Conference (APRASC'10), K1-4, Toyama, Sep.