

2009-2011 ENEA-INMRI activity report: articles published in journals or meeting proceedings in the field of photon and charged particle dosimetry

- 1 S. Baccaro, C. Caporali, A.S. Guerra, R.F. Laitano, A. Pasquali, M. Pimpinella: *“Il campione di riferimento dell’INMRI-ENEA per la dosimetria ad alte dosi in applicazioni industriali”*; - Proceedings of the 6th Conference “Metrologia & Qualità”, Turin, Italy, 7-9 April 2009
- 2 M. Pimpinella, A.S. Guerra; R.F. Laitano, G. Conte, *“La riferibilità ai campioni primari nella dosimetria in radioterapia con fasci di radiazione a intensità modulata (IMRT)”*, - Proceedings of the 6th Conference “Metrologia & Qualità”, Turin, Italy, 7-9 April 2009
- 3 M. Bovi, R.F. Laitano, M. Pimpinella, M.P. Toni, K. Casarin, G. Tromba, A. Vascotto: *“Misure assolute di kerma in aria del fascio di luce di sincrotrone prodotto presso l’impianto Elettra di Trieste per applicazioni nella diagnostica medica ad alta risoluzione”*, - Proceedings of the 6th Conference “Metrologia & Qualità”, Turin, Italy, 7-9 April 2009
- 4 M. Bovi, A.S. Guerra, R.F. Laitano, M. Pimpinella, M.P. Toni: *“La riferibilità nelle misure di dose assorbita dal paziente nei trattamenti di brachiterapia”*, - Proceedings of the 6th Conference “Metrologia & Qualità”, Turin, Italy, 7-9 April 2009
- 5 M. Bovi, F. Campanella: *“Specifiche dei “Rapporti di prova” richiesti ai fini autorizzativi per l’impiego delle radiazioni ionizzanti nei luoghi di lavoro”*, - 6th Conference “Metrologia & Qualità”, Turin, Italy, 7-9 April 2009
- 6 R.F. Laitano, M. Pimpinella, M.P. Toni: *“Report to the CCRI Section I on the activity carried out at ENEA-INMRI on photon and charged particle dosimetry in the period 2007-2009”*, Report CCRI(I)/07-29-CCRI(I), BIPM, Sèvres, 18th meeting 14-16 May 2009
- 7 A.S. Guerra, R.F. Laitano, M. Pimpinella, M.P. Toni, *“Development of LDR and HDR brachytherapy absorbed dose standards at ENEA-INMRI”*, BIPM Workshop on Brachytherapy Metrology, Paris, 12 May 2009
- 8 N. Dell’Arena, *“Campionamento nella ISO/IEC 17025 Parte II. Documentazione per il campionamento”*, Tutto Misure Anno XI n° 1 pagg. 77-79, 2009
- 9 H.-M. Kramer, J.-M. Bordy, E. van Dijk, J. Dobrovodsky, S. Duane, G. Durando, R.-P. Kapsch, B. Karaböce, Ch. Koch, A. Kosunen, M. Pimpinella, A. Shaw, *“Metrology in external beam cancer therapy”*, 14th International Congress of Metrology, Paris, 22-25 June 2009
- 10 M.P. Toni et al, *“The project -Increasing cancer treatment efficacy using 3D brachytherapy- in the framework of the action iMERA-Plus of the European Metrology Research programme”* 2009 14th International Congress of Metrology, Paris, France, 22-25 June 2009
- 11 M.P. Toni, I. Aubineau-Lanièce, M. Bovi, J.M. Bordy, J. Cardoso, B. Chauvenet, , F. Gabris, J. E. Grindborg, A. S. Guerra, A. Kosunen, C. Oliveira, M. Pimpinella, T. Sander, H.J. Selbach, V. Sochor, J. Solc, J. de Pooter, E. van Dijk, *“Traceability to absorbed-dose-to-water primary standards in dosimetry of brachytherapy sources used for radiotherapeutic treatments”*, XIX IMEKO World Congress, Lisbon, Portugal 6-11 September 2009

- 12 Caporali, C., Conte, G., Guerra, A. S.; Laitano, R. F.; Pimpinella, M.: “*Study of a CVD diamond detector for absorbed dose measurement in photon beams with small field sizes*” World Congress of Medical Physics and Biomedical Engineering, Munich, Germany, 7-12 September 2009 - IFMBE Proceedings Vol 25/1 1016 - ISBN 978-3-642-03897-6
- 13 M.P. Toni, I. Aubineau-Lanière, M. Bovi, J. Cardoso, D. Cutarella, F. Gabris, J. E. Grindborg, A. S. Guerra, H. Jarvinen, C. Oliveira, M. Pimpinella, J. Plagnard, T. Sander, H.J. Selbach, V. Sochor, J. Solc, J. de Pooter, E. van Dijk, “*A Joint Research Project to improve the accuracy in dosimetry of brachytherapy treatments, in the framework of the European Metrology Research Programme*”, World Congress on Medical Physics and biomedical Engineering, Munich, Germany, 7-12 September 2009 - IFMBE Proceedings 25/1 pag. 421 - ISBN 978-3-642-03897-6
- 14 M. Bovi, C. Caporali, A.S. Guerra, R.F. Laitano, M. Pimpinella, M.P. Toni, I. Astefanoaei, “*Dosimetria in brachiterapia basata su campioni di dose assorbita in acqua: prospettive di sviluppo a livello europeo*”, Proceedings of VI National Congress of the Italian Association of Medical Physics (AIFM), Reggio Emilia, Italy, 16-19 September 2009
- 15 Caporali, C., Conte, G., Guerra, A. S., Laitano, R. F., Pimpinella, M.: “*Sviluppo di un rivelatore a diamante sintetico per dosimetria di riferimento in fasci di fotoni per radioterapia con campi di piccola dimensione*”, Proceedings of VI National Congress of the Italian Association of Medical Physics (AIFM), Reggio Emilia, Italy, 16-19 September 2009
- 16 Guerra, A.S., Pimpinella, M, Toni, M.P.: “*Dosimetria di riferimento in brachiterapia*”, Tutto Misure N°1, 2010
- 17 Radu,D., A S Guerra, A.S., Ionita, C., Astefanoaei, I.:“*Heat loss through the connecting thermistor wires in a 3-body graphite calorimeter*”, Metrologia 47 (2010) 179-191
- 18 Spadaro, S., Conte, G., Trucchi, D. M., Pimpinella, M., Guerra, A.S., Laitano, R.F. : “*Dynamic response of diamond sensors to ionizing radiation*”, Poster at E-MRS Spring meeting, Strasbourg, France, 7-11 Jun 2010
- 19 C Kessler, P J Allisy-Roberts, D T Burns, A S Guerra, R F Laitano and M Pimpinella -*Comparison of the standards for absorbed dose to water of the ENEA-INMRI (Italy) and the BIPM for 60Co γ rays*-Metrologia, 47 (2010), Tech. Suppl., 06002 doi: 10.1088/0026-1394/47/1A/06002
- 20 Pimpinella,M., De Coste, V., Conte, G., Guerra, A.S., Mangiacotti, F.P., Petrucci, A.: “*Performance of a CVD diamond detector for dosimetry radiotherapy photon beams*” Book of Extended Synopses of International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry – IAEA- CN-182, Vienna, Austria 8-12 November 2010
- 21 Pimpinella, M., Guerra, A.S., De Coste, V., Petrucci, A., Consorti, R.: “*Caratterizzazione di due tipi di micro-camere per misure di dose assorbita in radioterapia*”, Proceedings of the VII Congress “Metrologia & Qualità”, Turin, Italy, 13-15 April 2011
- 22 Burns D T, Allisy-Roberts P J, Desrosiers M F, Sharpe P H G, Pimpinella M, Lourenço V, Zhang Y L, Miller A, Generalova V, Sochor V, 2011, *Supplementary comparison CCRI(I)-S2 of standards for absorbed*

dose to water in ⁶⁰Co gamma radiation at radiation processing dose levels, Metrologia 48 (2011) Tech. Suppl. 06009 doi:10.1088/0026-1394/48/1A/06009

23 Spadaro, S., Conte, G., Trucchi, D. M., Pimpinella, M., Guerra, A.S., Laitano, R.F. : “*Dynamic response of diamond sensors to ionizing radiation*”, Sensors and Actuators A: Physical, in press, doi:10.1016/j.sna.2010.12.017

24 Kessler C., Allisy-Roberts P. J., Burns D. T., Guerra A. S., Laitano R. F., and Pimpinella M., “*Comparison of the standards for absorbed dose to water of the ENEA-INMRI (Italy) and the BIPM for ⁶⁰Co-gamma rays*”, Metrologia 47 (2010) doi:10.1088/0026-1394/47/1A/06002

25 Toni, MP: “*New brachytherapy standards paradigm shift*” Book of Extended Synopses of International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry – IAEA- CN-182, Vienna, Austria 8-12 Nov 2010