

# List of Publications of Ivelina Stoianova Dimitrova

## Chapters in monographies (1):

1. D. Pressyanov, I. Dimitrova, K. Mitev S. Georgiev, Retrospective Radon Measurements: Techniques and Perspectives, Chapter 4 in “Handbook of Radon: Properties, Applications and Health”, editors: Zachary Li and Christopher Feng, 2012, Nova Science Publishers, Inc., ISBN: 978-1-62100-177-5

## Articles in international journals with IF (31):

1. S. Georgiev, K. Mitev, Ch. Dutsov, T. Boshkova, I. Dimitrova, “Partition Coefficients and Diffusion Lengths of  $^{222}\text{Rn}$  in Some Polymers at Different Temperatures”, **Int. J. Environ. Res. Public Health**, 16 (2019) 4523, doi:10.3390/ijerph16224523
2. D. Pressyanov, L.S. Q. Poncela, S. Georgiev, I. Dimitrova, K. Mitev, C. Sainz, I. Fuente, D. Rabago “Testing and Calibration of CDs as Radon Detectors at Highly Variable Radon Concentrations and Temperatures”, **Int. J. Environ. Res. Public Health**, 16(17) (2019) 3038, <https://doi.org/10.3390/ijerph16173038>
3. K. Mitev, S. Georgiev, I. Dimitrova, D. Pressyanov, “Radon-222 in soil-gas measurements by compact disks. Comparison to diffusion chamber measurements”, **Radiat. Prot. Dosim.**, 181 No 1 (2018) 38-41.
4. K. Mitev, P. Cassette, I. Tartès, S. Georgiev, I. Dimitrova, D. Pressyanov, “Diffusion lengths and partition coefficients of  $^{131}\text{mXe}$  and  $^{85}\text{Kr}$  in Makrofol N and Makrofol DE polycarbonates”, **Appl. Radiat. Isotopes**, 134 (2018) 269-274
5. D. Pressyanov, D. Dimitrov, I. Dimitrova “Passive radon monitors with part-time sensitivity to radon”, **Radiat. Meas.**, 118 (2018) 72-76
6. D. Pressyanov, I. Dimitrova, K. Mitev, S. Georgiev, D. Dimitrov, “Identifying radon priority areas and dwellings with radon exceedances in Bulgaria using stored CD/DVDs”, **J. of Environ. Radioact.**, 196 (2019) 274-280.
7. D. Pressyanov, K. Mitev, S. Georgiev, I. Dimitrova, J. Kolev “Laboratory facility to create reference radon + thoron atmosphere under dynamic exposure conditions”, **J. of Environ. Radioact.**, 166 (2017) 181 – 187.

8. B. Burghelle, A. Cucos, B. Papp, T. Dicu, D. Pressyanov, D. Dimitrov, I. Dimitrova, S. Constantin. Comparative study of radon and thoron measurements in four Romanian show caves. **Radiat. Prot. Dosim.**177 (2017) 181-185. doi: 10.1093/rpd/ncx131.
9. K. Mitev, S. Georgiev, I. Dimitrova, D. Pressyanov, "Application of scintillation counting using polycarbonates to radon measurements", **Radiat. Meas.**, 92 (2016) 32 - 38.
10. K. Mitev, I. Dimitrova, A. Tarancón, D. Pressyanov, L. Tsankov, T. Boshkova, S. Georgiev, R. Sekalova, J. F. García, "Pilot Study of the Application of Plastic Scintillation Microspheres to Rn-222 Detection and Measurement", **IEEE Trans. Nucl. Sci.**, 63 No. 2 (2016) 1209 - 1216.
11. S. Georgiev, I. Dimitrova, D. Pressyanov, K. Mitev, "Retrospective Rn-220 Measurements by Compact Discs", **IEEE Trans. Nucl. Sci.**, 63 No. 1 (2016) 333 – 340.
12. I. Dimitrova, S. Georgiev, D. Pressyanov, B. Sabot, N. Michielsen, S. Bondiguel, K. Mitev, "Influence of the type of CD case on the track density distribution in CDs exposed to thoron", **Appl. Radiat. Isotopes**, 109 (2016) 393 - 396. **IEEE Trans. Nucl. Sci**
13. K. Mitev, P. Cassette, S. Georgiev, I. Dimitrova, B. Sabot, T. Boshkova, I. Tartès, D. Pressyanov, "Determination of <sup>222</sup>Rn absorption properties of polycarbonate foils by liquid scintillation counting. Application to <sup>222</sup>Rn measurements", **Appl. Radiat. Isotopes**, 109 (2016) 270 - 275.
14. D. Pressyanov, K. Mitev, S. Georgiev, I. Dimitrova, "Optimization of etching conditions of CDs/DVDs used as detectors for <sup>222</sup>Rn", **Radiat. Meas.**, 83 (2015) 36-40.
15. D. Pressyanov, D. Dimitrov,, I. Dimitrova, "Energy-efficient reconstructions and indoor radon: the impact assessed by CDs/DVDs", **J. of Environ. Radioact.**, 143 (2015) 76-79.
16. K. Mitev, S. Georgiev, D. Pressyanov, I. Dimitrova, V. Zhivkova, T. Boshkova, "A high-sensitivity method for the measurement of <sup>222</sup>Rn based on liquid scintillation counting of polycarbonate powder", **Radiat. Prot. Dosim.**, 160 (2014) 188-191.
17. K. Mitev, V. Zhivkova, D. Pressyanov, S. Georgiev, I. Dimitrova, G. Gerganov, T. Boshkova, "Liquid scintillation counting of polycarbonates: A sensitive technique for measurement of activity concentration of some radioactive noble gases", **Appl. Radiat. Isotopes**, 93 (2014) 87-95.
18. D. Pressyanov, E. Foerster, S. Georgiev, I. Dimitrova, K. Mitev. Traceability of CDs/DVDs **Radiat. Meas.** 59 (2013) 165-171.
19. D. Pressyanov, S. Georgiev, I. Dimitrova, K. Mitev. Experimental study of the response of radon track detectors with solid absorbers as radiators. **Radiat. Meas.** 50 (2013) 141-144
20. D. Pressyanov, I. Dimitrova, S. Georgiev, K. Mitev. Pilot experiments on retrospective thoron measurements by CDs/DVDs. **Radiat. Meas.** 50 (2013) 218-222.

21. K. Mitev, I. Dimitrova, V. Zhivkova, S. Georgiev, G. Gerganov, D. Pressyanov, T. Boshkova. Measurement of Rn-222 in water by absorption in polycarbonates and liquid scintillation counting. **Nucl. Instrum. Meth. A** 677 (2012) 31-40.
  22. S. Georgiev, K. Mitev, D. Pressyanov, I. Dimitrova, T. Boskova. Numerical modelling of the activity concentration measurements of beta-radioactive noble gases by absorption in polycarbonates and external beta-counting. **Radiat. Meas.** 47(4) (2012) 303-310.
  23. I. Dimitrova, D. Pressyanov, S. Georgiev and P. Yankov. Logistic of surveys of retrospective radon concentrations by home stored CDs/DVDs. **Radiat. Prot. Dosim.** 145(2-3) (2011) 300-304.
  24. D. Pressyanov, S. Georgiev, I. Dimitrova, K. Mitev and T. Boshkova. Determination of the diffusion coefficient and solubility of radon in plastics. **Radiat. Prot. Dosim.** 145(2-3) (2011) 123-126.
  25. D. Pressyanov, K. Mitev, I. Dimitrova, S. Georgiev. Solubility of krypton, xenon and radon in polycarbonates. Application for measurements of their radioactive isotopes. **Nucl. Instrum. Meth. A** 629 (1) (2011) 323-328.
  26. I. Dimitrova, K. Mitev, D. Pressyanov, S. Georgiev, T. Boshkova. Measurements of  $^{222}\text{Rn}$  and  $^{226}\text{Ra}$  in water by absorption of radon in polycarbonates and etching alpha-tracks. **Radiat. Meas.** 46 (2011) 119-126.
  27. D. Pressyanov, K. Mitev, S. Georgiev, I. Dimitrova. Radon mapping by retrospective measurements – an approach based on CDs/DVDs. **J. Env. Radioact.** 10 (2010) 821-825.
  28. K. Mitev, Y. Madzhunkov, G. Gerganov, I. Dimitrova, S. Georgiev, D. Pressyanov. An Algorithm for Automatic Counting of Electrochemically Etched Tracks in Compact Disks. Application to Retrospective Measurements of Rn-222. **IEEE Trans. Nucl. Sci.** 57(1) (2010) 300-308.
  29. D. Pressyanov, K. Mitev, S. Georgiev, I. Dimitrova. Sorption and desorption of radioactive noble gases in polycarbonates. **Nucl. Instrum. Meth. A** 598 (2009) 620-627.
  30. K. Mitev, D. Pressyanov, I. Dimitrova, S. Georgiev, T. Boshkova, V. Zhivkova. Measurement of krypton-85 in water by absorption in polycarbonates. **Nucl. Instrum. Meth. A** 603 (2009) 491-494.
  31. D. Pressyanov, I. Dimitrova, S. Georgiev, E. Hristova, K. Mitev. Measurement of radon-222 in water by absorption in Makrofol. **Nucl. Instrum. Meth. A** 574 (2007) 202-204.
- L. Tsankov, D. Pressyanov, K. Mitev, S. Georgiev, I. Dimitrova. Automatic counting of chemically etched tracks by means of a computer scanner. **Radiat. Meas.** 39 (2005) 557-559.

### **Publications in other journals (3):**

1. *И. Димитрова, Г. Гоев, С. Георгиева, Ц. Цанова, Л. Иванова, Б. Георгиев. Изследователски практикум. Chemistry: Bulgarian Journal of Science Education 27 (2018) 722 – 730.*
2. *I. Dimitrova, K. Mitev, D. Pressyanov, S. Georgiev. Desorption of  $^{222}\text{Rn}$  from Polycarbonate Samples. **Trans. BgNS** 12 (2008) 33-37.*
3. *S. Georgiev, D. Pressyanov, K. Mitev, I. Dimitrova. Calibration of Diffusion Chambers for Measuring  $^{222}\text{Rn}$  in Air. **Trans. BgNS** 12 (2008) 3-6.*

### **Full text papers in international conference proceedings (17):**

1. *D. Pressyanov, D. Dimitrov, I. Dimitrova, "High Sensitivity Passive Radon Detector for Measuring Radon in Low-background Underground Nuclear/Particle Physics Laboratories.", **IEEE-NSS Conf. record.**, 2018 Nuclear Science Symposium, Sydney, Australia.*
2. *K. Mitev, I. Dimitrova, A. Tarancón, D. Pressyanov, L. Tsankov, T Boshkova, S. Georgiev, R. Sekalova, J. F. García, "Pilot Study of the Application of Plastic Scintillation Microspheres to Rn-222 Detection and Measurement.", **IEEE-NSS Conf. record.**, 2015 Nuclear Science Symposium, San Diego, the USA.*
3. *S. Georgiev, I. Dimitrova, D. Pressyanov, K. Mitev. Retrospective Rn-220 Measurements by Compact Discs.", **IEEE-NSS Conf. record.**, 2015 Nuclear Science Symposium, San Diego, the USA.*
4. *D. Pressyanov, D. Dimitrov, I. Dimitrova, S. Georgiev and K. Mitev. Novel approaches in radon and thoron dosimetry. **AIP Conference Proceedings** 1607, 24 (2014); <https://doi.org/10.1063/1.4890699>*
5. *I. Dimitrova, S. Georgiev, D. Pressyanov, T. Boshkova, F. Vassileva, Diffusion Length of Rn-222 in Home-stored CDs/DVDs - Influence on Rn-222 and Rn-220 Measurements 2016 Nuclear Science Symposium, Strasbourg, France.. **IEEE-NSS Conf. record.***
6. *D. Pressyanov, D. Dimitrov, S. Georgiev, I. Dimitrova, "Tests of CDs/DVDs as Passive Radon and Thoron Detectors for Mines and Caves.", **IEEE-NSS Conf. record.**, 2015 Nuclear Science Symposium, San Diego, USA.*
7. *I. Dimitrova, K. Mitev, T. Boshkova, S. Georgiev, An Approach to Study the Distribution of Radon in Natural Materials Containing Radium. 2013 Nuclear Science Symposium, Seoul, Korea. **IEEE-NSS Conf. record.***
8. *I. Dimitrova, S. Georgiev, K. Mitev, D. Pressyanov. Influence of the Water Temperature on Measurement of Rn-222 in Water by Liquid Scintillation Counting of Polycarbonates. 2012 Nuclear Science Symposium, Los Angeles, CA, USA. **IEEE-NSS Conf. record.***

9. S. Georgiev, I. Dimitrova, D. Pressyanov, K. Mitev. Retrospective Rn-220 Measurements by Compact Discs. 2012 Nuclear Science Symposium, Los Angeles, CA, USA. **IEEE-NSS Conf. record.**
10. G. Gerganov, V. Kuvandjiev, I. Dimitrova, I. Kawrakow, K. Mitev. NUMERICS: An Online Image Registration and Image Comparison Platform. 2012 Nuclear Science Symposium, Los Angeles, CA, USA. **IEEE-NSS Conf. record.**
11. I. Dimitrova, K. Mitev, V. Zhivkova, S. Georgiev, G. Gerganov, D. Pressyanov. Measurement of Rn-222 in Water by Liquid Scintillation Counting of Polycarbonates. 2011 Nuclear Science Symposium, Valencia, Spain. **IEEE-NSS Conf. record.**
12. S. Georgiev, K. Mitev, D. Pressyanov, T. Boshkova, I. Dimitrova. Measurement of Xe-133 in Air by Absorption in Polycarbonates - Detection Limits and Potential Applications. 2011 Nuclear Science Symposium, Valencia, Spain. **IEEE-NSS Conf. record.**
13. K. Mitev, R. Tsibranski, V. Avramov, B. Stoenelova, I. Dimitrova, T. Boshkova, S. Georgiev. Measurements of I-131, Cs-134 and Cs-137 in Environmental Samples in Bulgaria after the Fukushima Accident. . 2011 Nuclear Science Symposium, Valencia, Spain. **IEEE-NSS Conf. record.**
14. D. Pressyanov, I. Dimitrova, S. Georgiev, and K. Mitev. Radon survey based on home stored CDs/DVD. **Proc. of Third European IRPA Congress**, Helsinki, 2010.
15. D. Pressyanov, S. Georgiev, K. Mitev, I. Dimitrova. Measuring radon in air, water and soil gas by absorption in polycarbonates. 33<sup>rd</sup> Int. Geological Congress, Oslo 6-14 August 2008, p. 245, **Conf. record: EGG03747P.**
16. D. Pressyanov, I. Dimitrova, S. Georgiev, K. Mitev. Measurement of <sup>222</sup>Rn by absorption in polycarbonates - research and practice. **Proc. 18<sup>th</sup> AARST International Radon Symposium**, Las Vegas, 14 – 17 September 2008, p. 1.
17. K. Mitev, Y. Madzhunkov, G. Gerganov, I. Dimitrova, S. Georgiev, D. Pressyanov. An algorithm for automatic counting of electrochemically etched tracks in compact disks used for retrospective measurements of radon-222. 2008 Nuclear Science Symposium, Dresden, Germany 19-25 October 2008. **IEEE-NSS Conf. record: 1000508.**

### **Full text papers in proceedings from national conferences (10):**

1. И. Димитрова, , К. Митев, С. Георгиев, Д. Пресиянов. Система за създаване на референтни обемни активности на Rn-222 във въздух на базата на радонов монитор RAD7. **Сборник доклади от XXII национален научен симпозиум Метрология и метрологично осигуряване 2012.**

2. С. Георгиев, К. Митев, И. Димитрова, Д. Пресиянов. Компютърен код за прецизно пресмятане на активността на радиоактивни благородни газове абсорбирани в поликарбонатни гранули. **Сборник доклади от XXII национален научен симпозиум Метрология и метрологично осигуряване 2012.**
3. Г. Герганов, В. Куванджиев, И. Димитрова, К. Митев. NUMERICS: Интернет платформа за числена обработка, сравняване и анализ на нуклеарно-медицински образи. **Сборник доклади от XXII национален научен симпозиум Метрология и метрологично осигуряване 2012.**
4. К. Митев, И. Димитрова, С. Георгиев, И. Павлова, С. Илиева, Д. Дамянов, Г. Герганов. Калибриране на течно-сцинтилационен спектрометър Rackbeta – Spectral 1219 за измерване на концентрацията на  $^{222}\text{Rn}$  във води. **Сборник доклади от XXII национален научен симпозиум Метрология и метрологично осигуряване 2012.**
5. И. Димитрова, С. Георгиев, К. Митев, Т. Бошкова, Д. Пресиянов. Корекция за облъчване в малък обем при измерване на  $^{222}\text{Rn}$  във води чрез абсорбция в поликарбонати. **Сборник доклади от XX национален научен симпозиум Метрология и метрологично осигуряване 2010.**
6. С. Георгиев, И. Димитрова, Т. Бошкова, К. Митев, Д. Пресиянов. Определяне на ефективността за регистрация на алфа-частици на установка за измерване на ниски бета-активности УМФ-1500. **Сборник доклади от XX национален научен симпозиум Метрология и метрологично осигуряване 2010.**
7. И. Димитрова, К. Митев, С. Георгиев, В. Живкова, М. Илиев, Г. Нешовска, Т. Бошкова, Г. Маринов. Междудулабораторно сравнение по измерване на радон-222 във води чрез гама-спектрометрия и течносцинтилационно броене. **Сборник доклади от XXI национален научен симпозиум Метрология и метрологично осигуряване 2011.**
8. С. Георгиев, К. Митев, Д. Пресиянов, Г. Герганов, И. Димитрова. Компютърен код за прецизно пресмятане на активността и дълбочинното разпределение на радиоактивни благородни газове абсорбирани в поликарбонати. **Сборник доклади от XXI национален научен симпозиум Метрология и метрологично осигуряване 2011.**
9. И. Димитрова, С. Георгиев, К. Митев, Д. Пресиянов. Калибриране на компакт дискове за измервания на Радон-222 във въздух. **Сборник доклади от XIX национален научен симпозиум Метрология и метрологично осигуряване 2009.**
10. С. Георгиев, И. Димитрова, Д. Пресиянов, К. Митев. Измервания на Радон-222 в жилища и в почвен газ с поликарбонатен метод. **Сборник доклади от XIX национален научен симпозиум Метрология и метрологично осигуряване 2009.**