


PERSONAL INFORMATION Nikolay Ivanov Djourelou

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Sex Male | Date of birth | Nationality Bulgarian

WORK EXPERIENCE

Sept.2021-present	Senior researcher II degree, Dr. Habil.	
	ELI-NP/ IFIN-HH, Magurele-Bucharest Responsible for the positron source TDR and its implementation	
Sept.2015-Sept.2021	Senior researcher II degree	
	ELI-NP/ IFIN-HH, Magurele-Bucharest ▪ Responsible for the positron source TDR and its implementation	
July.2014-Sept.2015	Senior research III degree	
	ELI-NP/ IFIN-HH, Magurele-Bucharest, Romania ▪ Responsible for the positron source TDR	
Sept.2007-July.2014	Associate professor	
	INRNE-BAS, Sofia, Bulgaria ▪ Materials research with Positron spectroscopy and Slow positron beam	
Sept.2006-Sept.2007	Invited reasearcher (CNRS)	
	LMOPS, University of Savoie, France ▪ Build positron laboratory	
Sept.2005-Sept.2006	Postdoctoral fellow (FEDRA)	
	Ghent University, Ghent, Belgium ▪ Materials research with positron spectroscopy and slow positron beam	
Sept.2004-Sept.2005	Associate professor	
	INRNE-BAS, Sofia, Bulgaria ELI-NP/ IFIN-HH,	

	Magurele-Bucharest	
	▪ Materials research with Positron spectroscopy	▪
Sept.2002- Sept.2004	Postdoctoral fellow (JSPS)	
	High Energy Accelerator Research Organization (KEK), Tsukuba, Japan	
	▪ Materials research with positron spectroscopy and slow positron beam	▪
2001- Sept.2002	Assistant professor	
	LMOPS, University of Savoie, France	
	▪ Materials research with positron spectroscopy	▪
1997-2001	Researcher I degree	
	INRNE-BAS, Sofia, Bulgaria	
	▪ Materials research with positron spectroscopy, computer simulation of nuclear reactor fuel	▪
1997-2001	Physicist	
	INRNE-BAS, Sofia, Bulgaria	
	▪ Materials research with positron spectroscopy	▪

EDUCATION AND TRAINING

- 1993-1996 **PhD**
Sofia State University, Sofia, Bulgaria
- Application of positron annihilation methods for studying defects in thin solid films, sol-gels and superconductors
- 1987-1992 **Master**
Sofia State University, Sofia, Bulgaria
- specialization in solid body physics

PERSONAL SKILLS

Mother tongue(s) Bulgarian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Russian	C1	C1	B2	B2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

- Communication skills**
- good communication skills gained through my work as researcher with a long international experience
- Organisational / managerial skills**
- leadership (currently responsible for a team of 3 people)
 - advising people (scientific supervisor of PhD students)
 - decision making skills
- Job-related skills**
- ability to work under pressure
 - assembling equipment
 - calculating data
 - technical work
 - supporting others

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Proficient user	Proficient user	Independent user	Proficient user

Levels: Basic user - Independent user -
[Digital competences - Self-assessment grid](#)

- good command of office suite (word processor, spread sheet, presentation software)
- good command of physics simulation softwares (GEANT4, COMSOL) gained as an researcher
- good command of MATLAB, LABVIEW gained as an researcher

ADDITIONAL INFORMATION

Publications	> 110 in referred international journals
Presentations	> 40
Projects	11
Conferences	> 30
Citations	> 1500
H-index (Scopus)	15

ANNEXES
ARTICLES IN REFERED JOURNALS/BOOKS

1. N.Nancheva, P.Docheva, N.Feschiev, M.Misheva and N.Djourelov, Defects in sputter-deposited aluminium films, studied by X-ray diffraction and positron annihilation, Scripta Metalurgica et Materialia, 33 (1995) 575-581.
2. M.Misheva, N.Djourelov, Tzv.Kotlarova, D.Elenkov and G.Passage, Study of as-grown defects in thin titanium films by positron annihilation spectroscopy, Balkan Physics Letters, 3 (1995) 83-86.
3. M.Misheva, N.Djourelov, F.M.A.Margaca, I.M.Miranda Salvado and G.Passage, A study of free-volume

- hole distributions in $x\text{TiO}_2 \cdot (1-x)\text{SiO}_2$ by positron annihilation spectroscopy, *J.Phys.:Conds.Matter* 8 (1996) 6313-6321.
4. N.Djourelov and M.Misheva, Source correction in positron annihilation lifetime spectroscopy, *J.Phys.:Conds.Matter* 8 (1996) 2081-2087.
 5. M.Misheva, N.Djourelov, Tzv.Kotlarova, D.Elenkov and G.Passage, Study of defects in thin titanium films by positron annihilation spectroscopy, *Thin Solid Films* 283 (1996) 26-29.
 6. N.Nancheva, N.Feshiev, D.Tzaneva, M.Misheva and N.Djourelov, Positron trapping at defects in Y-Ba-Cu-O, La-Nd-Ba-Cu-O and La-Nd-Pb-Cu-O superconductors, *J. of Materials Processing Tech.* 68 (1997) 8-12.
 7. N.Nancheva, N.Feschiev, M.Misheva, N.Djourelov, Tz.Kotlarova and D.Elenkov, Defects in sputter-deposited titanium films, studied by positron annihilation and X-ray diffraction, *Nukleonika* 42 (1997) 169-174.
 8. N.Nancheva, P.Docheva P.Hadjijaska, M.Misheva, N.Djourelov and D.Elenkov, Investigation of the effect of oxygen and substrate bias on the defect structure of sputter-deposited SnOx films, *Scripta Materialia* 37 (1997) 1957-1962.
 9. N.Nancheva, P.Docheva, M.Misheva and N.Djourelov, A Study Of Defect Structure Of Sputter-Deposited SnOx Films Using The Doppler Broadening Of The Annihilation Line, *Bulg. J. Phys.* 25 (1998) 171-176.
 10. N.Djourelov, D.Gogova and M.Misheva, Study of thin chemical vapour deposited tungsten oxide films by positron annihilation spectroscopy, *Thin Solid Films* 347 (1999) 302-306.
 11. M.Misheva, M.Mihaylova, N.Djourelov, M.Kresteva, V.Krestev, E.Nedkov, Radiation Positron Annihilation Life-Time Spectroscopy Studies of Irradiated Poly(propylene-co-ethylene)/Poly(ethylene-co vinyl acetate) Blends, *Radiation Physics and Chemistry* 58 (2000) 39-47.
 12. M.Misheva, N.Djourelov, A.Dimitrova, G.Zamfirova, Ultrahigh molecular weight polyethylene free volume hole structure studied by positron annihilation lifetime technique, *Macromol. Chem. Phys.* 201 (2000) 2348-2353.
 13. M.Misheva, N.Djourelov*, F.M.A.Margasa, I.M.Miranda Salvado, Positronium Decay Study of Zirconia-Silica-gels, *J. Non-Crystalline Solids* 272 (2000) 209-217.
 14. M.Misheva, N.Djourelov* and E.T.Nedkov, Gamma Irradiation Effect Upon Positron Annihilation in Ultra High Molecular Weight Poly (Ethylene Oxide), *Radiation Physics and Chemistry* 62 (2001) 379-385.
 15. M.Misheva, N.Djourelov*, F.M.A.Margaca and I.M.Miranda Salvado, Positron Annihilation Spectroscopy Applied On Sol-Gel Prepared SiO₂, *J.Non Cryst. Sol.* 279 (2001) 196-203.
 16. M.Misheva, I.Avramova, St.Plachkova and N.Djourelov, Study Of Defects In GeTe and (GeTe)_{1-X}(AgBiTe₂)_X Solid Solutions By Positrons, *Acta Physica Polonica A* 99 (2001) 423-428.
 17. M.Misheva, N.Djourelov, I.Seganov, Effect Of Annealing On Free-Volume Properties Of Poly(Ethylene Terephthalate) Studied By Positron Annihilation, *Acta Physica Polonica A* 99 (2001) 429-434.
 18. N.Nancheva, P.Docheva, N.Djourelov and M.Balcheva, Positron Study of Cu-Se, In-Se and CuInSe₂ Thin Films, *Materials Science Forum* 363-365 (2001) 147-149.
 19. M.Misheva, N.Djourelov, N.Sertova, I.Petkov and T.Deligeorgiev, Study of γ -Irradiated Benzothiazole-Doped Polyvinyl Chloride by Positron Annihilation, *Mat.Sci.Forum*, 363-365 (2001) 319-321.
 20. D.Elenkov, S.Boneva, N.Djourelov, M.Georgieva, S.Georgiev, Verification of the Transuranus-WWER Code Version v1m2j00 By SOFIT and KOLA-3 Data Bases, Part I, *DOKL BOLG AKAD NAUK*, 54 (2001) 47-52.
 21. Nancheva N., P. Docheva, N. Djourelov. Effect of the Substrate Bias on the structural defects in copper films. *Известия на СУ – Русе*, 2002, No 3, pp. 103-105.
 22. N.Nancheva, P.Docheva, N.Djourelov and M.Balcheva, Positron and X-Ray Diffraction Study of In-Se, Cu-Se and Cu-In-Se₂, *Materials Letters* 54 (2002) 169-174.
 23. D.Elenkov, S.Boneva, N.Djourelov, M.Georgieva, S.Georgiev, Verification of the Transuranus-WWER Code Version v1m2j00 By SOFIT and KOLA-3 Data Bases, Part II, *DOKL BOLG AKAD NAUK*, 55 (2002) 27-32.
 24. G.Zamfirova, M.Misheva, M.Kresteva, N.Djourelov, R.Benevente, E.Perez, J.M.Perena, Physical Aging of Poly(diethylene glycol-p,p' bibenzoate), *Journal of Applied Polymer Science* 83 (2002) 2363-2368.
 25. G.Zamfirova, M.Misheva, E.Perez, R.Benavente, M.Cerrada, N.Djourelov, M.Kresteva, J.M.Perena, Norbornene-Ethylene Copolymers Studied by Non-Destructive Methods, *Polymer Journal* 34 (2002) 779-785.
 26. N.Djourelov, M.Misheva, G.Zamfirova, R.Benavente, E.Pérez, J.M.Pereña, Positron Annihilation in Norbornene-Ethylene Copolymers, *Macromol. Chem. Phys.* 204 (2003) 1531-1538.
 27. C.He, E.Hamada, N.Djourelov, T.Suzuki, H.Kobayashi, K.Kondo, Y.Ito, Development on a pulsed slow positron beam: Moderator and bunching signal waveform, *Nucl. Instr. Meth. B* 211 (2003) 571-576.
 28. N.Djourelov, C.He, T.Suzuki, V.P.Shantarovich, Y.Ito, K.Kondo, Y.Ito, Positron Annihilation in Polypropylene studied by Lifetime and Coincidence Doppler-Broadening Spectroscopy, *Rad. Phys. Chem.* 68 (2003) 689-695.

29. V.P.Shantarovich, T.Suzuki, C.He, N.Djourelov, I.B.Kevdina, V.A.Davankov, A.V.Pastukhov, Y. Ito, Positron Annihilation in Polymers with Highly Developed Specific Surface, *Materials Science Forum* 445-446 (2004) 346-349.
30. N.Djourelov, T.Suzuki, C.He, Y.Ito, K.Velitchkova, E.Hamada, K.Kondo, Carbon-Implanted Polyethylene Characterized by a Pulsed Slow-Positron Beam, *Materials Science Forum* 445-446 (2004) 280-283.
31. Y.Ito, N.Djourelov, T.Suzuki, K.Kondo, Y.Ito, V.Shantarovich, J.Onoe, Application of coincidence Doppler-broadening spectroscopy to different carbon phases, *Materials Science Forum* 445-446 (2004) 310-313.
32. N.Djourelov, T.Suzuki, Y.Ito, K.Velitchkova, K.Kondo, Variable-Energy Positron Annihilation Lifetime and Doppler-Broadening of the Annihilation Line Study of Carbon-Implanted Polyethylene. *Nucl. Instr. Meth. B*, 225(2004) 357-363.
33. N.Djourelov, T.Goworek, K.Kondo, T.Suzuki, R.Zaleski, Enhancement of positronium formation by trapped electrons in solid n-nonadecane. Light bleaching effect. *Physics Letters A* 323 (2004) 165-168.
34. C. He, T. Suzuki, V.P.Shantarovich, N.Djourelov, K. Kondo, Y. Ito, Positron annihilation studies of hyper-cross-linked polystyrenes, *Chem. Physics* 303 (2004) 219-226.
35. N.Djourelov, T.Suzuki, R.S.Yu, V.Shantarovich, K.Kondo, Application of coincidence Doppler broadening spectroscopy to polypropylene and polyethylene: taking into account the positronium formation, *Chem. Physics* 302 (2004) 179-184.
36. N.Djourelov, T.Suzuki, Y.Ito, V.P.Shantarovich, Y.Ito, K.Kondo, J.Onoe, Application of Coincidence Doppler Broadening Spectroscopy to simple hydrocarbons, *Chem. Phys.* 298 (2004) 183-187.
37. N.Djourelov, C.He, T.Suzuki, Y.Ito, K.Velitchkova, E.Hamada, K.Kondo, Carbon Implanted Ultra High Molecular Weight Polyethylene Studied by Slow Positron Beam, *Nucl. Instr. Meth. B* 215 (2004) 83-89.
38. N.Djourelov, T.Suzuki, V.P.Shantarovich, T.Dobreva, Y.Ito, Transitions and Relaxations in Gamma-Irradiated Polypropylene Studied by Positron Annihilation Lifetime Spectroscopy, *Rad. Phys. Chem.* 72 (2005) 13-18.
39. N.Djourelov, T.Suzuki, M.Misheva, F.M.A.Margaça, I.M.Miranda Salvado. Positron annihilation lifetime study of organic-inorganic hybrid materials prepared by irradiation. *J. Non-Crystalline Solids*, 351 (2005) 340-345.
40. T.Xu, Y.Bin, N.Djourelov, T.Suzuki, M.Matsuo, Positron annihilation study of density fluctuation of amorphous poly(ethylene terephthalate) films in terms of the quasi-spinodal decomposition, *Phys. Rev. B* 71 (2005) 075204.
41. R.S.Yu, T.Suzuki, N.Djourelov, K.Kondo, Yasuo Ito, and V.Shantarovich, Positron annihilation lifetime and coincidence Doppler broadening study of γ -irradiated polyethylene, *Chemical Physics* 313 (2005) 63–69. IF/1.934/a/6
42. S.Okamoto, R.S.Yu, N. Djourelov, T.Suzuki, Study on thermal behavior of solution-cast liquid crystalline polymer film by positron annihilation lifetime spectroscopy, *Polymer* 46 (2005) 6455–6460.
43. N.Djourelov, T.Suzuki, V.Shantarovich, K.Kondo, Positronium formation in sol-gel-prepared silica-based glasses. Temperature and positron-irradiation effect. *Rad. Phys. Chem.* 72 (2005) 723-729.
44. N.Djourelov, T.Suzuki, Y.Ito, V.Shantarovich, K.Kondo, Gamma and positron irradiation effects on polypropylene studied by coincidence Doppler broadening spectroscopy. *Rad. Phys. Chem.* 72 (2005) 687-694.
45. N.Djourelov, T.Suzuki, R.S.Yu, Y.Ito, Coincidence Doppler broadening study on hydrocarbons with pi and sigma valence electrons. Positronium correction, *Nucl. Instr. Meth. A* 540 (2005) 487-494.
46. R.S.Yu, T.Suzuki, Y.Ito, N.Djourelov, K.Kondo, V.Shantarovich, Application of coincidence Doppler broadening spectroscopy to hydrocarbons at different substance states, *Acta Physica Polonica A* 107 (2005) 697-701.
47. A.Macková, V.Havránek, V.Švorčík, N. Djourelov, T.Suzuki, Degradation of PET, PEEK and PI induced by irradiation with 150 keV Ar⁺ and 1,76 MeV 4He ions, *Nucl.Instr.Meth. B*, B 240 (2005) 245–249.
48. V.P. Shantarovich, T. Suzuki, N. Djourelov, A. Shimazu, V.W. Gustov, I.B. Kevdina, Some Aspects of Free Volume Studies in Molecular Substances Using Positronium Annihilation Experiments, *Acta Physica Polonica A* 107 (2005) 629-634.
49. R.S.Yu, T.Suzuki, Y.Ito, N.Djourelov, K.Kondo, V.Shantarovich, Coincidence Doppler broadening study of polar and nonpolar molecules in liquid and solid states, *Chemical Physics Letters* 406 (2005) 101–105.
50. B.Ganguly, N.Djourelov, T.Suzuki, S.Kundu, Surface Modification of Mica by Titanium Sputtering and Studied by Positron Annihilation, *Applied Radiation and Isotopes* 64 (2006) 651–655.
51. R.S.Yu, T.Suzuki, N.Djourelov, Y.Ito, K.Kondo, Study of irradiation effect on positronium formation in polypropylene, *Rad. Phys. Chem.* 75 (2006) 247–252.
52. C.A. Palacio, N. Djourelov, J. Kuriplach, C. Dauwe, N. Laforest, and D. Segers, Doppler broadening of positron annihilation radiation as a probe for the anisotropy of free-volume-holes in polymers, *Phys. Status Solidi (c)* 4, 10 (2007) 3755-3758.
53. J. De Baerdemaeker, K. Boussu, N. Djourelov, B. Van der Bruggen, C. Dauwe, M. Weber, K.G. Lynn,

- Investigation of nanopores in nanofiltration membranes using slow positron beam techniques, *Phys. Status Solidi (c)* 4, 10 (2007) 3804-3809.
54. N. Djourelov, C. Dauwe, C. A. Palacio, N. Laforest, C. Bas, On the consistency between positron annihilation lifetime and Doppler broadening results in polypropylene, *Phys. Status Solidi (c)* 4, 10 (2007) 3710-3713.
 55. N. Djourelov, C. Dauwe, C. A. Palacio, N. Laforest, C. Bas, Positron states in polypropylene and polystyrene at low temperature, *Phys. Status Solidi (c)* 4, 10 (2007) 3743-3746.
 56. N. Djourelov, Z. Ateş, O. Güven, M. Misheva, T. Suzuki, Positron Annihilation Lifetime Spectroscopy of Molecularly Imprinted Hydroxyethyl Methacrylate Based Polymers, *Polymer* 48 (2007) 2692-2699.
 57. N. Djourelov, N. Charvin, C. Bas, J. Viret, V. Samoylenko, D. Sillou, Symmetric analog positron lifetime spectrometer utilizing charge-to-digital converters, *Nucl. Instr. Meth. B* 264 (2007) 165–170.
 58. M. Misheva, N. Djourelov*, G. Zamfirova, V. Gaydarov, M. L. Cerrada, V. Rodríguez-Amor, E. Pérez, Effect of compatibilizer and electron irradiation on free-volume and microhardness of syndiotactic polypropylene/clay nanocomposites. *Rad.Phys.Chem.*, 77 (2008) 138 - 145.
 59. N.Djourelov, C.A.Palacio, J. De Baerdemaeker, C.Bas, N.Charvin, K.Delendik, G.Drobychev, D. Sillou, O.Voitik, S.Gninenko, A study of positronium formation in anodic alumina, *J. Phys.: Condens. Matter* 20 (2008) 095206.
 60. Kellerbauer, A., Amoretti, M., Belov, A.S., Bonomi, G., Boscolo, I., Brusa, R.S., Buchner, M., Byakov, V.M., Cabaret, L., Canali, C., Carraro, C., Castelli, F., Cialdi, S., de Combarieu, M., Comparat, D., Consolati, G., Djourelov, N., Doser, M., Drobychev, G., Dupasquier, A., Ferrari, G., Forget, P., Formaro, L., Gervasini, A., Giammarchi, M.G., Gninenko, S.N., Gribakin, G., Hogan, S.D., Jacquy, M., Lagomarsino, V., Manuzio, G., Mariazzi, S., Matveev, V.A., Meier, J.O., Merkt, F., Nedelec, P., Oberthaler, M.K., Pari, P., Prevedelli, M., Quasso, F., Rotondi, A., Sillou, D., Stepanov, S.V., Stroke, H.H., Testera, G., Tino, G.M., Trenc, G., Vairo, A., Vigue?, J., Walters, H., Warring, U., Zavatarelli, S., Zvezhinskij, D.S., Proposed antimatter gravity measurement with an antihydrogen beam (2008) *Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms*, 266 (2008) pp. 351-356
 61. Dauwe, C., De Baerdemaeker, J., Djourelov, N., Laforest, N., Van Waeyenberge, B., Is kapton* really that simple? *Acta Physica Polonica A* 113 (2008) 1315-1319.
 62. R.Bryaskova, R.Mateva, N.Djourelov, M.Krasteva, Study of multiblock Polyamide 6Poly (isoprene) copolymers by positron annihilation spectroscopy, *Cent Eur J Chem* 6 (2008) 575.
 63. G. Testera, A.S. Belov, G. Bonomi, I. Boscolo, N. Brambilla, R. S. Brusa, V.M. Byakov, L. Cabaret, C. Canali, C. Carraro, F. Castelli, S. Cialdi, M. de Combarieu, D. Comparat, G. Consolati, N. Djourelov, M. Doser, G. Drobychev, A. Dupasquier, D. Fabris, G. Ferrari, A. Fischer, A. Fontana, P. Forget, L. Formaro, M. Lunardon, A. Gervasini, M.G. Giammarchi, S.N. Gninenko, G. Gribakin, R. Heyne, S.D. Hogan, A. Kellerbauer, D. Krasnický, V. Lagomarsino, G. Manuzio, S. Mariazzi, V.A. Matveev, F. Merkt, S. Moretto, C. Morhard, G. Nebbia, P. Nedelec, M.K. Oberthaler, P. Pari, I. A. Qaradawi, V. Petracek, M. Prevedelli, F. Quasso, O. Rohne, S. Pesente, A. Rotondi, S. Stapnes, D. Sillou, S.V. Stepanov, H.H. Stroke, G. Tino, A. Vairo, G. Viesti, H. Walters, U. Warring, S. Zavatarelli, A. Zenoni, D.S. Zvezhinskij (AEGIS Proto-Collaboration). Formation Of A Cold Antihydrogen Beam in AEGIS For Gravity Measurements. *AIP Conf Proc* 1037 (2008) 5-15.
 64. Uhlenhaut, D.I., Dalla Torre, F.H., Castellero, A., Gomez, C.A.P., Djourelov, N., Krauss, G., Schmitt, B., Patterson, B., Löffler, J.F. Structural analysis of rapidly solidified Mg-Cu-Y glasses during room-temperature embrittlement (2009) *Philosophical Magazine*, 89 (3) pp. 233-248.
 65. G. Bonomi; M.G. Giammarchi; A.S. Belov; I. Boscolo; N. Brambilla; R.S. Brusa; V.M. Byakov; L. Cabaret; C. Canali; C. Carraro; F. Castelli; S. Cialdi; M. De Combarieu; D. Comparat; G. Consolati; N. Djourelov; M. Doser; G.A. Drobychev; A. Dupasquier; R. Ferragut; L. Formaro; M. Lunardon; A. Gervasini; S.N. Gninenko; G. Gribakin; R. Heyne; A. Kellerbauer; D. Krasnický; V. Lagomarsino; G. Manuzio; S. Mariazzi; V.A. Matveev; S. Moretto; C. Morhard; G. Nebbia; P. Nedelec; M.K. Oberthaler; P. Pari; V. Petracek; M. Prevedelli; I.Y. Al-Qaradawi; F. Quasso; O. Rohne; S. Pesente; A. Rotondi; S. Stapnes; D. Sillou; S.V. Stepanov; H.H. Stroke; G. Testera; G.M. Tino; A. Vairo; G. Viesti; F. Villa; H. Walters; U. Warring; S. Zavatarelli; A. Zenoni; D.S. Zvezhinskij, MEASURING THE ANTIHYDROGEN FALL, *HYPERFINE INTERACTIONS* (ISSN: 0304-3843), 193 (2009) 297-303.
 66. M.G. Giammarchi, A.S. Belov, G. Bonomi, I. Boscolo, N. Brambilla, R.S. Brusa, V.M. Byakov, L. Cabaret, C. Canali, C. Carraro, F. Castelli, S. Cialdi, M. De Combarieu, D. Comparat, G. Consolati, N. Djourelov, M. Doser, G. Drobychev, A. Dupasquier, F. Fabris, R. Ferragut, G. Ferrari, A. Fischer, A. Fontana, P. Forget, L. Formaro, M. Lunardon, A. Gervasini, S.N. Gninenko, G. Gribakin, R. Heyne, A. Kellerbauer, D. Krasnický, V. Lagomarsino, G. Manuzio, S. Mariazzi, V.A. Matveev, S. Moretto, C. Morhard, G. Nebbia, P. Nedelec, M.K. Oberthaler, P. Pari, V. Petracek, M. Prevedelli, I.Y. Al-Qaradawi, F. Quasso, O. Rohne, S. Pesente, A. Rotondi, S. Stapnes, D. Sillou, S.V. Stepanov, H.H. Stroke, G. Testera, G.M. Tino, A. Vairo, G. Viesti, F. Villa, H. Walters, U. Warring, S. Zavatarelli, A. Zenoni, D.S. Zvezhinskij, Efficient Rydberg positronium laser excitation for antihydrogen production in a magnetic field, *HYPERFINE INTERACTIONS* (ISSN: 0304-3843), 193 (2009) 321-327.

67. D.Fabris, the AEGIS collaboration, A.S. Belov, G. Bonomi, I. Boscolo, N. Brambilla, R.S. Brusa, V.M. Byakov, L. Cabaret, C. Canali, C. Carraro, F. Castelli, S. Cialdi, D. Comparat, G. Consolati, L. Dassa, N. Djourelov, M. Doser, G. Drobychev, A. Dudarev, A. Dupasquier, R. Ferragut, G. Ferrari, A. Fischer, P. Folegati, A. Fontana, L. Formaro, M. Lunardon, A. Gervasini, M.G. Giammarchi, S.N. Gninenko, R. Heyne, S.D. Hogan, L.V. Jørgensen, A. Kellerbauer, D. Krasnicky, V. Lagomarsino, F. Leveraro, G. Manuzio, S. Mariazzi, V.A. Matveev, F. Merkt, S. Moretto, C. Morhard, G. Nebbia, P. Nedelec, M.K. Oberthaler, D. Perini, V. Petracek, M. Prevedelli, I.Y. Al-Qaradawi, F. Quasso, C. Riccardi, O. Rohne, S. Pesente, A. Rotondi, M. Spacek, S. Stapnes, D. Sillou, S.V. Stepanov, H.H. Stroke, G. Testera, G. Tino, D. Trezzi, A.V. Turbabin, R. Vaccarone, A. Vairo, G. Viesti, H. Walters, U. Warring, S. Zavatarelli, A. Zenoni and D.S. Zvezhinskij, The AEGIS detection system for gravity measurements, *Nuclear Physics A*, 834 (2010) 751c-753c.
68. Nikolay Djourelov, Corine Bas, Daniel Sillou, Rosario Benavente, Ernesto Pérez, María L. Cerrada, Positron Spectroscopy Analysis in Metallocene Propylene\1-Octadecene Copolymers: Parameters Dependence on Monoclinic and Mesomorphic Polymorphs, *J Polym Sci B* 48 (2010) 1994-2002.
69. Nikolay Djourelov, Yann Aman, Kalin Berovski, Patrick Nédélec, Nicolas Charvin, Vincent Garnier, and Elisabeth Djurado, Structure characterization of spark plasma sintered alumina by positron annihilation lifetime spectroscopy, *Phys. Status Solidi A*, 208 (2011) 795-802.
70. N. Laforest, C. Bas, J. De Debaerdemaker, N. Djourelov, C. Dauwe, The Free Positron Lifetime in Amorphous Polymers at Low Temperature, *Phys Stat Sol A*, 248(6) (2011) p. 1453-1458.
71. N. Laforest, C. Bas, J. De Debaerdemaker, N. Djourelov, C. Dauwe, Extra formation of positronium in amorphous polymers at low temperature, *Phys. Status Solidi B* 248 (2011) 1459–1463.
72. Ferragut, R., Belov, A.S., Bonomi, G., Boscolo, I., Brusa, R.S., Byakov, V.M., Cabaret, L., Calloni, A., Canali, C., Carraro, C., Castelli, F., Cialdi, S., Comparat, D., Consolati, G., Dassa, L., Djourelov, N., Doser, M., Drobychev, G., Dudarev, A., Dupasquier, A., Ferrari, G., Fischer, A., Folegati, P., Fontana, A., Formaro, L., Giammarchi, M.G., Gninenko, S.N., Heyne, R., Hogan, S.D., Jørgensen, L.V., Kellerbauer, A., Krasnicky, D., Lagomarsino, V., Manuzio, G., Mariazzi, S., Matveev, V.A., Morhard, C., Nebbia, G., Nedelec, P., Oberthaler, M.K., Perini, D., Petracek, V., Prez, F., Prevedelli, M., Al-Qaradawi, I.Y., Quasso, F., Riccardi, C., Rohne, O., Rotondi, A., Sacerdoti, M., Sandaker, H., Sillou, D., Stepanov, S.V., Stroke, H.H., Testera, G., Trezzi, D., Turbabin, A.V., Vaccarone, R., Villa, F., Warring, U., Zavatarelli, S., Zenoni, A., Zvezhinskij, D.S. Antihydrogen physics: Gravitation and spectroscopy in AEGIS, *Canadian Journal of Physics*, 89 (2011) 17-24.
73. Doser, M., Alkofer, Y., Amsler, C., Belov, A.S., Bonomi, G., Boscolo, I., Brusa, R.S., Byakov, V.M., Cabaret, L., Calloni, A., Canali, C., Carraro, C., Castelli, F., Cialdi, S., Comparat, D., Consolati, G., Dassa, L., Djourelov, N., Drobychev, G., Dudarev, A., Dupasquier, A., Ferragut, R., Ferrari, G., Fischer, A., Folegati, P., Fontana, A., Formaro, L., Giammarchi, M.G., Gninenko, S.N., Hauptert, F., Heyne, R., Hogan, S.D., Jørgensen, L.W., Kaltenbacher, T., Kellerbauer, A., Krasnicky, D., Lagomarsino, V., Manuzio, G., Mariazzi, S., Matveev, V.A., Merkt, F., Morhard, C., Nebbia, G., Nedelec, P., Oberthaler, M.K., Perini, D., Petracek, V., Prez, F., Prevedelli, M., Al-Qaradawi, I.Y., Quasso, F., Regenfus, C., Riccardi, C., Rohne, O., Rotondi, A., Sacerdoti, M., Sandaker, H., Sillou, D., Stepanov, S.V., Storey, J., Stroke, H.H., Testera, G., Trezzi, D., Turbabin, A.V., Vaccarone, R., Villa, F., Walters, H., Warring, U., Zavatarelli, S., Zenoni, A., Zvezhinskij, D.S., Measuring the fall of antihydrogen: The AEGIS experiment at CERN, *Physics Procedia* 17 (2011) 49-56.
74. G.Zamfirova, N.Djourelov, J.M.Perena, R.Benavente, E.Perez, M.L.Cerrada, S. Peneva, V. Gaydarov, Polypropylene/carbon nanotubes composites studied by DMTA and PALS, *Nanoscience and Nanotechnology 2011, Section F* (2011) 21-24.
75. G.Gutierrez, N.Toulhoat, N.Moncoffre, Y.Pipon, N.Djourelov, A.Maître, M.Gendre, P.Nedelec, High temperature annealing of Xe implanted ZrC_{0.95}O_{0.05} investigated by RBS, TEM and PAS-DBS, *Progress in Nuclear Energy* 57 (2012) 57–61; ISSN: 0149-1970.
76. N.Djourelov, G.Gutierrez, H.Marinov, E.Popov, N.Toulhoat, N.Moncoffre, Y.Pipon, P.Nédélec, Xe-implanted zirconium oxycarbide studied by variable energy positron beam, *Nucl. Instr. Meth. B* 269 (2011) 2709-2714; ISSN: 0168-583X.
77. N. Djourelov, Y. Aman, D. Sillou, P. Nedelec, Pore closure in spark plasma sintered alumina studied by variable energy positrons, *Eur. Phys. J. Appl. Phys.* 57 (2012) 20402.
78. Zamfirova G., N. Djourelov, A Closer Insight To The Nature Of Micro- And Nanoindentation Experiment, *Machines Techn. Mater.* 12 (2012) 37.
79. Chateau, D., Chaput, F., Lopes, C., Lindgren, M., Brännlund, C., Öhgren, J., Djourelov, N., Nedelec, P., Desroches, C., Eliasson, B., Kindahl, T., Lerouge, F., Andraud, C., Parola, S., Silica hybrid sol-gel materials with unusually high concentration of pt-organic molecular guests: Studies of luminescence and nonlinear absorption of light, *ACS Applied Materials and Interfaces*, 4 (2012) 2369-2377.
80. N. Djourelov, B. Marchand, H. Marinov, N. Moncoffre, Y. Pipon, P. Nédélec, N. Toulhoat, D. Sillou, Variable energy positron beam study of Xe-implanted uranium oxide, *Journal of Nuclear Materials*, 432 (2013) 287-293.
81. P. Staikov, N. Djourelov, Simulations of <100> Edge and 1/2<111> Screw Dislocations in α -Iron and

- Tungsten and Positron Lifetime Calculations, *Physica B* 413 (2013) 59-63.
82. N. Djourelou, B. Marchand, H. Marinov, N. Moncoffre, Y. Pipon, N. Béreard, P. Nédélec, L. Raimbault, T. Epicier, Study of temperature and radiation induced microstructural changes in Xe-implanted UO₂ by TEM, STEM, SIMS and positron spectroscopy, *Journal of Nuclear Materials* 443 (2013) pp. 562-569.
 83. N. Djourelou, H. Marinov, Xe Bubbles Formation in Materials for use in Nuclear Reactors Studied by Slow Positrons, *Bulg. J. Phys.* 40 (2013) 289-293.
 84. H. Marinov, N. Djourelou*, P. Nédélec, L. Petrov, Design, simulation and performance of a slow positron beam with secondary electron tagging for positron annihilation lifetime spectroscopy, *Nuclear Instruments and Methods in Physics Research Section A* 729 (2013) 569-575.
 85. M. Lépinay, N. Djourelou, H. Marinov, L. Broussous, K. Courouble, C. Licitra, F. Bertin, V. Rouessac, A. Ayrat, Depth-resolved impact of integration process on porosity and solvent diffusion in a SiOCH low-k material, *Journal of Porous Materials* 21 (2014) 475-484.
 86. Popov, E., Staykov, P., Berovski, K., S. Peneva, Djourelou, N., Troev, T., Positron momentum calculation of defects in α -Fe and Fe-Cr containing hydrogen and helium, *Journal of Physics: Conference Series* 516 (2014) 01034.
 87. Zamfirova, G., Chemeva, S., Gaydarov, V., Djourelou, N. , Nanocomposites based on epoxy resin. Simulation of microindentation process, *Colloids and Surfaces A* 460 (2014) 254-264.
 88. L. T. Dimowa, O. E. Petrov, N. I. Djourelou, and B. L. Shivachev, Structural study of Zn-exchanged natural clinoptilolite using powder XRD and positron annihilation data, *Clay Miner* 50 (2015) 55-64.
 89. L. T. Dimowa, O. E. Petrov, N. I. Djourelou, and B. L. Shivachev, Evaluation of the possible use of a Bulgarian clinoptilolite for removing strontium from water media *Clay Miner* 50 (2015) 41-54
 90. Victor, G., Pipon, Y., Béreard, N., Toulhoat, N., Moncoffre, N., Djourelou, N., Miro, S., Baillet, J., Pradeilles, N., Rapaud, O., Maître, A., Gosset, D., Structural modifications induced by ion irradiation and temperature in boron carbide B₄C, *Nucl. Instr. Meth. B* 365 (2015) 300-304.
 91. Nikolay Djourelou, Andreea Oprisa, Victor Leca, Source of slow polarized positrons using the brilliant gamma beam at ELI-NP. Converter design and simulations, *Nucl. Instr. Meth. A* 806 (2016) 146–153.
 92. N. Djourelou, A. Oprisa, V. Leca, Project for a Source of Polarized Slow Positrons at ELI-NP, *Defect and Diffusion Forum* 373 (2017) 57-60.
 93. D. Dinescu, N. Djourelou, Using a Bent Tube as an Energy Filter for a Positron Beam. Simulations on Determining the Optimum Angle of the Bend, *Acta Physica Polonica* 132 (2017) 1624-1627.
 94. D. Dinescu, N. Djourelou, Simulations on reducing the influence of backscattered slow positrons on lifetime measurements, *UPB Scientific Bulletin, Series A* 79 (2017) 317-326.
 95. N. Djourelou, and D. Dinescu, Design and simulation of a pulsed positron beam at ELI-NP, *J. Phys.: Conf. Series* 791 (2017) 012010.
 96. N. Djourelou, A. Oprisa, D. Dinescu, and V. Leca, Status of the project for a positron laboratory at ELI-NP, *J. Phys.: Conf. Series* 791 (2017) 012011.
 97. S Gales, K A Tanaka, D L Balabanski, F Negoita, D Stutman, O Tesileanu, C A Ur, D Ursescu, I Andrei, S Ataman, M O Cernaianu, L D'Alessi, I Dancus, B Diaconescu, N Djourelou, D Filipescu, P Ghenuche, D G Ghita , C Matei, K Seto, M Zeng, N V Zamfir, The extreme light infrastructure—nuclear physics (ELI-NP) facility: new horizons in physics with 10 PW ultra-intense lasers and 20 MeV brilliant gamma beams, *Reports on Progress in Physics* 81 (2018) 094301.
 98. N. Djourelou, Studies of Nuclear Reactor Core Materials by Positron Spectroscopy, *J. Nucl. Res. Dev.* 15 (2018) 3-8
 99. Ion Dobrin, Nikolay Djourelou, Dan Enache, Alexandru Morega, Andrei Dobrin, Iuliu Popovici, Simulations of cryogenic system for the slow positron production at ELI-NP, *UPB Scientific Bulletin, Series A* 81 (2019) 241-250.
 100. Valentin Gaydarov, Zhangyan Chen, Galina Zamfirova, Meshude Akbulut Soylemez, Jinming Zhang, Nikolay Djourelou, Jun Zhang, Micromechanical and positron annihilation lifetime study of new cellulose esters with different topological structures, *Carbohydrate Polymers* 219 (2019) 56-62.
 101. N. Djourelou, D. Dinescu and V. Leca, An overview of the design of ELIPS—a new slow positron beam line, *Nucl. Instr. Meth. A* 934 (2019) 19-25.
 102. V.L. Ene, D. Dinescu, N. Djourelou, I. Zai, B.S. Vasile, A.B. Serban, V. Leca, E. Andronescu, Study of Edge and Screw Dislocation Density in GaN/Al₂O₃ Heterostructure, *Materials* , 12(24) (2019) 4205.
 103. V.L. Ene, D. Dinescu, N. Djourelou, I. Zai, B.S. Vasile, A.B. Serban, V. Leca, E. Andronescu, Defect Structure Determination of GaN Films in GaN/AlN/Si Heterostructures by HR-TEM, XRD, and Slow Positrons Experiments, *Nanomaterials* 10 (2020) 197.
 104. Simionescu, O.-G., Romanitan, C., Albu, C., Pachiu, C., Vasile, E., Djourelou, N., Tutunaru, O., Stoian, M.C., Kusko, M., Radoi, A., Properties of Nitrogen-Doped Nano-Crystalline Graphite Thin Films and Their Application as Electrochemical Sensors, *Journal of the Electrochemical Society* 167 (2020) 126510.
 105. G. Zamfirova, V. Gaydarov, N. Djourelou, J. Zhang, J. Zhang, PALS and nanoindentation as complementary methods for investigating cellulose derivatives (esters and carbamates), *Materials Today: Proceedings* 34 (2021) 304-310.

106. Capponi, L., Kuşoğlu, A., Söderström, P.-A., Balabanski, D., Turturică, G., Bocchi, G., Chesnevskaya, S., Dhal, A., Dinescu, D., Djourelou, N., Niu, Y., Oprisa, A., Pappalardo, A., Suliman, G., Ur, C., First in-beam experiment with the ELIADe detectors: a spectroscopic study of ¹³⁰La, *Journal of Instrumentation* 16 (2021) T12001.
107. Djourelou, N., Serban, A.B., Optimization of a device for positron moderation based on a magnetic bottle, *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 1014 (2021) 165699.
108. Varasteanu, P., Romanitan, C., Bratosin, I., Djourelou, N., Gavrilă, R., Radoi, A., Kusko, M., Exploring the impact of MoS₂ on the performance of the planar solid micro-supercapacitor, *Materials Chemistry and Physics* 265 (2021) 124490.
109. Serban, A.B., Ene, V.L., Dinescu, D., Zai, I., Djourelou, N., Vasile, B.S., Leca, V., Studies of defect structure in epitaxial aln/gan films grown on (111) 3c-SiC, *Nanomaterials* 11 (2021) 1299.
110. Bratosin, I.-N., Romanitan, C., Craciun, G., Djourelou, N., Kusko, M., Stoian, M.C., Radoi, A., Graphitized porous silicon decorated with cobalt hexacyanoferrate nanocubes as hybrid electrode for high-performance supercapacitors, *Electrochimica Acta* 424 (2022) 140632.
111. Neov, D., Slavov, L., Donkov, A.A., Mirzayev, M.N., Popov, E., Demir, E., Siemek, K., Djourelou, N., Turchenko, V.A., Sharipov, Z.A., Horodek, P., Beskrovnyi, A.I., Valizade, A.H., Samedov, O.A., Vladescu, A., Krezhov, K., Felicia, I., Structural study of W₂B obtained via mechanical alloying of W, B₄C, TiC and graphite before and after He ions irradiation, *Nuclear Materials and Energy* 31 (2022) 101201.
112. Dragoman, M., Vulpe, S., Aperathithis, E., Aivalioti, C., Romanitan, C., Dinescu, A., Dragoman, D., Aldrigo, M., Djourelou, N., Modreanu, M., Moldovan, A., Oxygen-vacancy induced ferroelectricity in nitrogen-doped nickel oxide, *Journal of Applied Physics* 131 (2022) 164304.

ARTICLES IN FULL TEXT IN CONFERENCE PROCEEDINGS

1. M.Misheva, I.Avrămova, St.Plachkova, N.Djourelou, "Positron Study of GeTe and (GeTe)_{1-x}(AgBiTe₂)_x Solid Solutions". University of Rousse "A.Kanchev", Electrical Engineering, Electronics, Automation, Physics. Rousse, Bulgaria, Proceedings of the Conference (1999) V.37, book 3, 351-356
2. M. Manolova, D. Elenkov, M. Georgieva, S. Boneva, V. Simeonova, N. Djourelou, S. Georgiev, K. Lassmann, J. van de Laar, "Validation of the TRANSURANUS code-WWER version by the updated KOLA-3 data set". Third International Seminar on WWER Fuel Performance, Modelling and Experimental Support. Pamporovo, Bulgaria, Proceedings of the Conference (1999) 252-262.
3. N. Djourelou, "Macroscopic Fission Gas Release Model Applied To Russian Fuel". International Seminar on Fission Gas Behavior in Water Reactor Fuels. Cadarache, France, Proceedings of the Conference (2000) 493-497.
4. N. Djourelou, "Study of Creep Strain Correlations of Zr-1%Nb Cladding Material Incorporated in TRANSURANUS Code". International Conference on WWER Reactor Fuel Performance, Modelling and Experimental Support. Albena, Bulgaria, Proceedings of the Conference (2001) 316-321.
5. V.Antonov, I.Iordanova, N.Djourelou, M.Misheva, D.Pavlova, Investigation Of Porosity And Point Defects In Thermally-Sprayed Metal Coatings Applied On Mild Steel, Proceedings of X Workshop Plasmatechnik, ILMENAU, Germany, (2002) 25-30.
6. A.Schubert, K.Lassmann, P.Van Uffelen, J.van de Laar, D.Elenkov, S.Asenov, S.Boneva, N.Djourelou, M.Georgieva, "Analysis of Fuel Centre Temperatures and Fission Gas Release Data from the IFPE Database". 5th International Conference on WWER Fuel Performance, Modelling and Experimental Support. Albena, Bulgaria, Proceedings of the Conference (2003) 375-381.
7. N. Djourelou, C. He, T. Suzuki, Y. Ito and K. Kondo, Y. Ito, and V.P. Shantarovich, The Influence Of Antioxidant On Positron Annihilation In Polypropylene, Proceedings of the 17-th Workshop on Radiation Detectors and Their Uses, KEK Proceedings, Tsukuba, Japan, (2003) 10-18.
8. M. Lépinay, N. Djourelou, H. Marinov, L. Broussous, K. Courouble, C. Licitra, F. Bertin, V. Rouessac, A. Ayrat, Porosity and solvent diffusion in low-network by ellipso-porosimetry and positron annihilation techniques, in: Advanced Metallization Conference (AMC), Albany, NY; United States, 2012, pp. 94-102.
9. Canali, C., Belov, A. S., Bonomi, G., Boscolo, I., Brambilla, N., Brusa, R. S., Byakov, V. M., Cabaret, L., Carrao, C., Castelli, F., Cialdi, S., Comparat, D., Consolati, G., Dassa, L., Djourelou, N., Doser, M., Drobychev, G., Dudarev, A., Dupasquier, A., Fabris, D., Ferragut, R., Ferrari, G., Fischer, A., Folegati, P., Fontana, A., Formaro, L., Lunardon, M., Gervasini, A., Giammarchi, M. G., Gninenko, S. N., Heyne, R., Hogan, S. D., Jørgensen, L. V., Kellerbauer, A., Krasnický, D., Lagomarsino, V., Leveraro, F., Manuzio, G., Mariazzi, S., Matveev, V. A., Merkt, J., Moretto, S., Morhard, C., Nebbia, G., Nedelec, P., Oberthaler, M. K., Perini, D., Petracek, V., Prevedelli, M., Al-Qaradawi, I. Y., Quasso, F., Riccardi, C., Rohne, O., Pesente, S., Rotondi, A., Spacek, M., Stapnes, S., Sillou, D., Stepanov, S. V., Stroke, H. H., Testera, G., Tino, G., Trezzi, D., Turbabin, A. V., Vaccarone, R., Vairo, A., Viesti, G., Walters, H., Warring, U., Zavatarelli, S., Zenoni, A., Zvezhinskij, D. S., The AEGIS Experiment (Antimatter Experiment:

Gravity, Interferometry, Spectroscopy) in Astroparticle, Particle and Space Physics, Detectors and Medical Physics Applications, Leroy, C., Rancoita, P.-G., Barone, M., Gaddi, A., Price, L., Ruchti, R., Editors. 2010, World Scientific Publishing Co. Pte. Ltd. : Singapore. p. 185-189.

C. ORAL REPORTS ON CONFERENCES AND SEMINARS

1. N. Djourelov, "On the consistency between positron annihilation lifetime and Doppler broadening results in polypropylene", ICPA-14, McMaster University, Hamilton, Ontario, Canada, 23-28.July.2006.
2. Séminaire de Nikolay Djourelov (Institute for Nuclear Research and Nuclear Energy, Sofia, Bulgarie), le jeudi 9 Novembre 2006, à 14h30: "Application of Positron Annihilation Techniques for Studying Polymers and Glasses". Salle de TD4 - IUT Chambéry, France.
3. N.Djourelov, "Positron annihilation study of anodic alumina. Positronium formation. "International Workshop "Positron. Positronium. Nanoporous Materials. Application", 20-21 November 2007, Annecy, France.
4. N.Djourelov, "Application of Positron Annihilation Lifetime Spectroscopy to Study Polymeric Materials", workshop "Standard and exotic applications of positron and positronium annihilation in physics and chemistry", 21.October.2008, INRNE, Sofia, Bulgaria.
5. N.Djourelov, "Anodic Alumina as Converter of Positron into Positronium Beam", workshop "Standard and exotic applications of positron and positronium annihilation in physics and chemistry", 21.October.2008, INRNE, Sofia, Bulgaria.
6. N.Djourelov, "New Coincidence Doppler Broadening Setup at INRNE.", workshop "Developments in Positron Spectroscopy. Data acquisition and applications.", 27.October.2009, INRNE, Sofia, Bulgaria.
7. Н.Джурелов, семинар „Принципи на позитронната спектроскопия. Приложение за изследване на полимерни материали.“ 26.11.2008, ХТМУ, София.
8. N.Djourelov, "Positron Annihilation Lifetime Spectroscopy. Principles and application for material science. " , seminar at Department of Chemistry, Hacettepe University, 04.June.2008.
9. N.Djourelov, "Positron annihilation spectroscopy in materials structure studies", seminar at INSA, MATEIS, Lyon, 22.06.2009.
10. Nikolay Djourelov (Institute for Nuclear Research and Nuclear Energy, Sofia, Bulgarie), 29 Novembre 2010, à 14h00: "Spark Plasma Sintered Alumina Studied by PALS and positron beam". LMOPS - IUT Chambéry, France.
11. Nikolay Djourelov, 30 Novembre 2010, à 14h00: "Preliminary positron beam results on Xe implanted ZrC0.9500.5", INSA-Lyon.
12. Nikolay Djourelov, 13 December 2011, STMicroelectronics, Crolles, France, "Positron annihilation spectroscopy in materials structure studies"
13. N. Djourelov, "Applications of positron annihilation techniques with e+ beam" at meeting « Positron Annihilation Techniques », june 29th 2012, CEA-LETI, Grenoble, France
14. Nikolay Djourelov, "Porosimetry using positron annihilation. Spectra analysis and results interpretation." 2012, Hacettepe University, Department of Chemistry, Ankara, TURKEY
15. N. Djourelov, H. Marinov, Xe Bubbles Formation in Materials for use in Nuclear Reactors Studied by Slow Positrons, SECOND NATIONAL CONGRESS ON PHYSICAL SCIENCES, 25–29 September 2013, Sofia, Bulgaria
16. N. Djourelov, A. Oprisa, and V. Leca, Project for a Source of Polarized Slow Positrons at ELI-NP, International Conference on Positron Annihilation (ICPA-17), Wuhan, China, 19-24 Sept 2015
17. N. Djourelov, A. Oprisa, V. Leca, Design and Simulations of the Source of Polarized Slow Positrons at ELI-NP, European Nuclear Physics Conference, EuNPC, Groningen, The Netherlands, 30.08-01.09.2015
18. N Djourelov, A Oprisa, D Dinescu, and V Leca, Status of the Project for a Positron Laboratory at ELI-NP, 14th International Workshop on Slow Positron Beam Techniques and Application (Slopos14), Matsue, Japan, 22-27 May, 2016
19. N. Djourelov, A. Oprisa, V. Leca, D. Dinescu, Project for a positron laboratory at ELI-NP. Positrons as probes to study materials, TIM 17, West University of Timisoara, Romania, May 25-27, 2017
20. N. Djourelov, Studies of nuclear reactor core materials by positron spectroscopy, Nuclear 2017, ICN-Mioveni, Romania, May 24-26, 2017.
21. N. Djourelov, Laser-assisted gamma source for industrial applications at ELI-NP, Industrial applications of high-power laser technologies of the Extreme Light Infrastructure (ELI), Republica Ceha, Dolni Brezany, ELI-Beamlines, 23-26.05.2018.

CONTRIBUTION TO PRESENTED POSTERS ON CONFERENCES

1. N. Nancheva , P. Docheva, N. Djourelov, M. Balcheva, Positron study of Cu-Se, In-Se and CuInSe2 Thin Films, 12th Int. Conference on Positron Annihilation, ICPA-12, Munchen, Germany, 2000
2. N. Nancheva N., P. Docheva, N. Djourelov, Effect of the substrate bias on the structural defects in

- copper films, 4th General Conference of the Balkan Physical Union, BPU-4, Veliko Turnovo, Bulgaria, 22-14 August, (2000)
3. N. Djourelov, C. Dauwe, C. A. Palacio, N. Laforest, C. Bas, "Positron states in polypropylene and polystyrene at low temperature", ICPA-14, McMaster University, Hamilton, Ontario, Canada, 23-28.July.2006.
 4. G. Zamfirova, V. Gaydarov, N. Djourelov, E. Nedkov, J. Perena, Positron Annihilation And Microhardness As Complementary Methods For Polymer Investigation, Prague Meetings On Macromolecules "CURRENT AND FUTURE TRENDS IN POLYMERIC MATERIALS" PRAGUE, 26 - 30 JUNE 2005, Czech Republic.
 5. D. Uhlenhaut, A. Castellero, F. Dalla Torre, C. Palacio, N. Djourelov, B. Schmitt, B.Patterson, J.F. Loffler, "Synchrotron x-Ray Diffraction Experiments and Positron Annihilation Spectroscopy of Glassy Mg65Cu25Y10 Ribbons", Symposium Z: Bulk Metallic Glasses, November 25 - 29, 2007, Boston, USA.
 6. Yann Aman, Nikolay Djourelov, Patrick Nedelec, Nicolas Charvin, Vincent, Garnier, Elisabeth Djurado, "Positron Annihilation Lifetime Spectroscopy As A Powerful Tool To Characterize Sintering: Application To Spark Plasma Sintering Of Alumina", Journée Scf Rhône-Alpes, 10.June.2010, Grenoble, France.
 7. N.Djourelov, K.Berovski, E.Popov, S.Peneva, T.Troev, Defect annealing in pure iron and paladium measured by coincidence Doppler broadening spectroscopy. Third International Workshop and Summer School on Plasma Physics, 30 June - 5 July, 2008, Kiten, Bulgaria.
 8. G.Zamfirova, N.Djourelov, J.M.Pereña, R.Benavente, E.Pérez, M.L.Cerrada, S.Peneva, V.Gaydarov, EPF 2011, XII GEP Congress, 26th June - 1st July 2011, Granada, Spain, T5 – 110; ISBN: 978-84-694-3124-5. Poster.
 9. L.Fambri, G.Zamfirova, D.Lorenzi, N.Djourelov, V.Gaydarov, S.Peneva, Tensile Modulus, Poisson Ratio, Storage Modulus, Indentation Modulus and PALS analysis of Polypropylene/Cycloolefin Copolymer Blends, ISPAC 2011(24th Int.Symp. on Polymer Analysis and Characterization) 6 – 8 June 2011, Torino, Italy.
 10. H. Marinov, N. Djourelov, Simulation of the effect of reimplanted backscattered positrons in Si, SECOND NATIONAL CONGRESS ON PHYSICAL SCIENCES, 25–29 September 2013, Sofia, Bulgaria
 11. V. Leca, A. Oprisa, S. Balascuta, N. Djourelov, C.A. Ur, Analytical methods based on positron, 09/2014 IZEST ELI-NP Conf. Extreme Lights New Horizons, Paris, France
 12. N. Djourelov, C.A. Ur, A. Oprisa, V. Leca, S. Balascuta, T. Marian, C. Petcu, B. Tatulea, V. Buznea, M. Conde, C. Paun, Gamma-to-Positron Converter for High Intensity and High Brilliance Positron Source at ELI-NP. Design Challenges and Simulation by GEANT4, 09/2014 IZEST ELI-NP Conf. Extreme Light's New Horizons - Paris - France
 13. C.A. Ur, H. Weller, S. Gales, C.Petcu, G.Suliman, M. Toma, C. Mihai, G. Pascovici, I. Mitu, M. Risca, B. Tatulea, N. Djourelov, A. Oprisa, J. Mueller, M., V.Buznea, M., Gamma Beam Delivery and Diagnostics at ELI-NP, 09/2014 IZEST ELI-NP Conf. Extreme Light's New Horizons - Paris – France
 14. N. Djourelov, C.A. Ur, A. Oprisa, V. Leca, S. Balascuta, T. Marian, C. Petcu, B. Tatulea, V. Buznea, M. Conde, C. Paun, Gamma-to-Positron Converter for High Intensity and High Brilliance Positron Source at ELI-NP. Design Challenges and Simulation by GEANT4, IZEST ELI-NP Conf. Extreme Lights New Horizons, Paris, France
 15. N. Djourelov, M. Lépinay, H. Marinov, Study of porosity in a SiOCH low-k material by slow positron beam with secondary electron tagging for positron annihilation lifetime spectroscopy, Workshop on Methods of Porosimetry and Applications, Helmholtz-Zentrum, Dresden-Rossendorf, Germany, 21-24 Oct 2015
 16. Victor Leca, Andreea Oprisa, Septimiu Balascuta, Nikolay Djourelov, Calin A. Ur, Analytical methods based on positrons, 11th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015" Bucharest, Romania, September 1 - 4, 2015
 17. Victor Leca, Andreea Oprisa, Nikolay Djourelov, Positron-based spectroscopy methods at ELI-NP, Methods of Porosimetry and Applications, HZDR Dresden-Rossendorf, Germany, 21-23 October 2015
 18. A. Oprisa, N. Djourelov, V. Leca, Techniques based on positrons at ELI-NP, International Conference on Extreme Light (ICEL 2015), Bucharest, Romania, 23-27 November 2015
 19. N. Djourelov, A. Oprisa, V. Leca, Project for Positron Spectroscopy Laboratory at ELI-NP, 11th International Conference "Micro- to Nano-Photonics IV- ROMOPTO 2015" Bucharest, Romania, September 1 - 4, 2015
 20. V. Leca, A. Oprisa, N. Djourelov, and C. A. Ur, Positron spectroscopy analytical methods at ELI-NP, 28th International Conference on Defects in Semiconductors (ICDS 2015), Espoo, Finland, July 27 – 31, 2015
 21. A. Oprisa, N. Djourelov, V. Leca, Positron Production at ELI-NP Simulated Using GEANT4, 28th International Conference on Defects in Semiconductors (ICDS-2015), Espoo, Finland, July 27 – 31, 2015
 22. V. Leca, A. Oprisa, S. Balascuta, N. Djourelov, C.A. Ur, Analytical methods based on positron, 09/2014 IZEST ELI-NP Conf. Extreme Light's New Horizons - Paris – France

23. N Djourelov, and D Dinescu, Design and simulation of a pulsed positron beam at ELI-NP, 14th International Workshop on Slow Positron Beam Techniques and Application (Slopos14), Matsue, Japan, 22-27 May, 2016.
24. A. Oprisa, N. Djourelov, D. Dinescu, and V. Leca, Simulations of production of slow positrons by brilliant gamma beam at ELI-NP, 14th International Workshop on Slow Positron Beam Techniques and Application (Slopos14), Matsue, Japan, 22-27 May, 2016
25. V. Leca, A. Oprisa, N. Djourelov, Positron Spectroscopy Analytical Methods for Material Studies at ELI-NP, 5th International Conference on Superconductivity and Magnetism (ICSM 2016), Fethiye, Turkey
26. D. Dinescu, N. Djourelov, Simulations on reducing the influence of backscattered slow positrons on lifetime measurements, 12th International Workshop on Positron and Positronium Chemistry, August 28 – September 01, Lublin, Poland, 2017
27. A. Oprisa, N. Djourelov, V. Leca, D. Dinescu, Slow positron beam and spectrometers at ELI-NP, 2nd International Conference on Nuclear Photonics, Brasov, Romania, , June 24-29, 2018
28. D. Dinescu and N. Djourelov, Characterization of epitaxial GaN thin films by slow positrons, 18th International Conference on Positron Annihilation, Orlando, U.S.A, 19-24.08.2018
29. Design of a Cryogenic Device for Solid Neon Deposition on a Positrons Source for ELI-NP Project
30. I. Dobrin, N. Djourelov, D. Enache, A. Dobrin, I. Popovici, G. Dumitru, Design of a Cryogenic Device for Solid Neon Deposition on a Positrons Source for ELI-NP Project, 18th International Balkan Workshop on Applied Physics and Materials Science, 10-13 July, Constanta 2018
31. D. Dinescu, A. Oprisa, V. Leca and N. Djourelov, The design and implementation of the positron spectroscopy laboratory at ELI-NP, 18th International Conference on Positron Annihilation, Orlando, U.S.A, 19-24.08.2018

CONTRIBUTION TO PROJECTS

1. Contract No 226/93 with Fund Scientific Research at Sofia University, Bulgaria on “Application of the positron annihilation methods to study thin films” 01.06.1993 – 31.05.1994, M. Misheva (project leader), N. Djourelov, Ts. Kotlarova
2. Contract No 165/95 with Fund Scientific Research at Sofia University, Bulgaria on “Application of the positron annihilation methods to study condensed matter – study of singlecrystal Germanium” 01.06.1995 – 31.05.1996, M. Misheva (project leader), N. Djourelov
3. Contract No Ф-645 with Fund Scientific Research at the Ministry of Education, Science and Technology, Bulgaria on “Study of polymers and other molecular compounds by methods of positron annihilation” 01.07.1996 – 31.07.1997. Addendum till 15.12.1999, M. Misheva (project leader), D.Elenkov, M.Krasteva, I.Seganov, S.Boneva, M.Georgieva, N.Djourelov
4. Contract No 7567/RB with IAEA – Vienna on “Application of PA spectroscopy for studying of as-grown defects in thin solid films”, M.Misheva (project leader), D.Elenkov, N.Nancheva, P.Docheva, Tzv.Kotlarova, N.Djourelov, A.Georgiev, N.Stefanov, From 15.09.1993 for 3 years
5. Contract No B5-BUL-32012 with IAEA – Vienna, on “Application of PA methods, together with conventional ones, to study the structural changes in some environmentally friendly polymers upon ionizing radiation”, M.Misheva (project leader), M.Krasteva, G.Zamfirova, N.Djourelov, N.Dishovski, From 15.11.2003 for 3 years.
6. Contract Rila4/222 with Ministry of Education, Science and Youth, Bulgaria on “Study of formation and thermalization of Positronium (SOFT)” 2009-2010, N.Djourelov (project leader), I. Mincov
7. Contract DVU01/0164 with Ministry of Education and Science, Bulgaria, on “Mechanical properties of polymer nanocomposites with industrial application” 2009-2011, G.Zamfirova (project leader), I.Kolarov, I Savova, V. Gajdarov, R. Kotsilkova, E.Ivanov, N.Djourelov, T. Kirova-Simova, N.Hristov, J. Perena, R. Benavente, E. Perez, M. Cerrada, J. Minster
8. Contract EBR2010-2011 between Bulgarian Academy of Science and UCBL, Lyon, France on “Positron spectroscopy developments and fundamental studies (PASTIS)”, N.Djourelov (project leader), I. Mincov
9. Contract Rila5/17 with Ministry of Education, Science and Youth, Bulgaria on “Technical applications of the positron spectroscopy (TAPAS)” 2012-2013, N.Djourelov (project leader), H.Marinov, E.Popov
10. 27-ELI/ COMPOSITE, Title: Development of new experimental setups and materials for the positron converter and moderator for the ELI-NP positron beam line, 2016-2019, Project coordinator: Nikolay Djourelov
11. ELI-RO 05/ POSBOT, Title: Slow positrons from magnetic bottle, 2020-2023, Project coordinator: Nikolay Djourelov