

List of ISI papers

Published papers

01. C. Qi, D.S. Delion, R.J. Liotta, and R. Wyss,
Effects of formation properties in one-proton radioactivity,
Physical Review **C85**, 011303 (2012).
02. D.S. Delion, R.J. Liotta, P. Schuck, A. Astier, and M.-G. Porquet,
Shell model plus cluster description of negative parity states in ^{212}Po ,
Physical Review **C85**, 064306 (2012).
03. F. Gulminelli and Ad. R. Raduta,
Ensemble in-equivalence in supernova matter within a simple model,
Physical Review C **85**, 025803 (2012).
04. F. Gulminelli, Ad. R. Raduta, and M. Oertel,
Phase transition toward strange matter,
Physical Review C **86**, 025805 (2012).
05. D.S. Delion and J. Suhonen,
*Unified description of 2^+_1 states within the deformed quasiparticle
random-phase approximation*,
Physical Review **C87**, 024309 (2013).
06. D.S. Delion, R.J. Liotta, and R. Wyss,
Simple approach to two-proton emission,
Physical Review **C87**, 034328 (2013).
07. D.S. Delion and R.J. Liotta,
Shell-model representation to describe alpha emission.
Physical Review **C87**, 041302(R) (2013).
08. D.S. Delion and A. Dumitrescu,
Unified description of electromagnetic and alpha transitions in even-even nuclei,
Physical Review **C87**, 044314 (2013).
09. F. Gulminelli, Ad. R. Raduta, M. Oertel, and J. Margueron.
Strangeness-driven phase transition in (proto-)neutron star matter,
Phys. Rev. **C87**, 055809 (2013).
10. D.S. Delion and A. Dumitrescu,
Coherent state description of alpha transitions to excited states in even-even nuclei,
Romanian Journal of Physics **58**, 1167 (2013).
11. L. Ixaru and D.S. Delion,
Two proton emission: a numerical approach,
Romanian Journal of Physics **58**, 1396 (2013).

- 12.** Ad. R. Raduta, F. Aymard, and F. Gulminelli,
Clusterized nuclear matter in the (proto-)neutron star crust and the symmetry energy,
European Physical Journal **A** 50, 24 (2014).
- 13.** P. Papakonstantinou, J. Margueron, F. Gulminelli, and Ad.R. Raduta,
Densities and energies of nuclei in dilute matter,
Physical Review **C** 88, 045805 (2014).
- 14.** L. Morelli,..., Ad.R. Raduta, et.al.
Thermal properties of light nuclei from $^{12}\text{C}+^{12}\text{C}$ fusion-evaporation reactions,
Journal of Physics **G** 41, 075107 (2014).
- 15.** L. Morelli,..., Ad.R. Raduta, et.al.
*Non-statistical decay and alpha-correlation. Morellis in the $^{12}\text{C}+^{12}\text{C}$
fusion-evaporation reaction at 95 MeV,*
Journal of Physics **G** 41, 075108 (2014).
- 16.** D.S. Delion, J. Suhonen,
Effective axial-vector strength and β -decay systematics,
European Physics Letters **107**, 52001 (2014).
- 17.** D.S. Delion, A. Dumitrescu,
Alpha decay fine structure in even-even nuclei,
Atomic Data Nuclear Data Tables **101**, 1 (2015).
- 18.** D.S. Delion, V.V. Baran,
Pairing versus quarteting coherence length,
Physical Review **C** **91**, 024312 (2015).
- 19.** D.S. Delion, J. Suhonen,
Double beta decay within a consistent deformed approach,
Physical Review **C** **91**, 054329 (2015).
- 20.** D.S. Delion, A. Dumitrescu,
Systematics of the alpha decay to excited states,
Physical Review **C** **92**, 021303(R) (2015).
- 21.** D.S. Delion, R.J. Liotta, and R. Wyss,
*Exact estimate of the alpha-decay rate
and semiclassical approach in deformed nuclei,*
Physical Review **C** **92**, 051301(R) (2015).
- 22.** V.V. Baran, D.S. Delion
Pairing coherence length in nuclei,
Romanian Journal of Physics **60**, 722-726 (2015).
- 23.** A. Dumitrescu, D.S. Delion,
Coherent state description of the alpha emission spectrum
Romanian Journal of Physics **60**, 767-771 (2015).

24. M. Oertel, C. Providência, F. Gulminelli. and *Ad. R. Raduta*,
Hyperons in neutron star matter within relativistic mean-field models
Journal of Physics G **42**, 075202 (2015).
25. *A. Dumitrescu and D.S. Delion*
*Description of electromagnetic and favored alpha-transitions
in heavy odd-mass nuclei*
Physical Review C **93**, 024313 (2016).
26. *D.S. Delion, P. Schuck, and M. Tohyama*,
*Sum-rules and Goldstone modes from extended RPA theories
in Fermi systems with spontaneously broken symmetries*,
European Physical Journal B **89**, 1-12 (2016).
27. *D.S. Delion, M. Patial, R.J. Liotta, and R. Wyss*,
Simple approach to alpha decay fine structure,
Journal of Physics G **43**, 095109 (2016).
28. *D.S. Delion, A. Dumitrescu, and V.V. Baran*,
*Even-odd staggering of the spectroscopic factor
as a new evidence for alpha-clustering*,
Physical Review C **94** (2016) (in press)
29. *L. Ixaru*
Numerical approach of some three-body problems,
Computer Physics Communications **208** (2016) (in press)

International conferences

- C01.** *D.S. Delion, L. Ixaru, V.V. Baran*
Probing pairing interaction by two-proton emission,
International workshop "SARFEN", Trento, Italy, 26-27 March, 2012.
<http://www.ectstar.eu/node/38>
- C02.** *D.S. Delion*,
Clustering features in decay processes,
International Summer School for Advanced Studies "Dynamics of open nuclear
Systems", Predeal, Romania, 9-20 July, 2012.
Journal of Physics: Conference Series **413**, 012011 (2013).
- C03.** *D.S. Delion and A. Dumitrescu*,
Nuclear structure versus alpha-clustering and alpha-decay,
"Clustering aspects in nuclei", Beijing, China, 1-26 April, 2013.
<http://www.kitpc.ac.cn/?p=ProgDetail&id=PI20130401&i=main>
- C04.** *D.S. Delion and A. Dumitrescu*,
Systematics of the alpha decay fine structure,
"Alpha decay as a probe of nuclear structure", Stockholm, Sweden, 12-13.09, 2013.
<http://www.nuclear.kth.se/alpha/presentation.htm>

- C05.** Ad. R. Raduta, F. Gulminelli, M. Oertel, J. Margueron,
Strangeness-driven phase transition in stellar matter,
"Nuclear Physics in Astrophysics VI", Lisbon, Portugal, 19-25 May 2013.
http://npa6.cii.fc.ul.pt/NPA6_webpage/NPA6_detailed_timetable.html
- C06.** Ad. R. Raduta, F. Aymard, F. Gulminelli,
Clusterized nuclear matter in the (proto-)neutron star crust and the symmetry energy,
"Eurisol - User Group Topical Meeting", Krakow, Poland, 1-3 July 2013.
<http://eurisol.ifj.edu.pl/>
- C07.** Ad. R. Raduta, F. Gulminelli,
Equation(s) of state and phase transitions in stellar matter,
"Seventh European summer school on experimental nuclear astrophysics"
Santa Tecla, Italy, 15-27 September 2013.
<http://agenda.infn.it/conferenceDisplay.py?confId=5302>
- C08.** Ad. R. Raduta, F. Gulminelli,
The nuclear symmetry energy and the neutron star crust, The birth and death of neutron stars, International workshop, Florence, Italy, March 2014.
<https://indico.cern.ch/event/264202/>
- C09.** Ad. R. Raduta, F. Gulminelli,
Clusterization in stellar matter, ECT-Workshop, Simulating the Supernova Neutrinosphere with Heavy Ion Collisions, 7-14 April 2014, Trento, Italy.
<http://www.ectstar.eu/node/771>
- C10.** Ad. R. Raduta, F. Gulminelli,
Hyperons in stellar matter, CARPATHIAN SUMMER SCHOOL OF PHYSICS 2014 Exotic Nuclei and Nuclear/Particle Astrophysics (V), From nuclei to stars, July 13 - 26, 2014, Sinaia, Romania.
<http://www.nipne.ro/indico/conferenceTimeTable.py?confId=141#20140716>
- C11.** Ad. R. Raduta, F. Gulminelli,
Clusterized nuclear matter in the (proto-)neutron star crust and the symmetry energy, Advanced many-body and statistical methods in mesoscopic systems II, September 1 - 5, 2014, Brasov, Romania
http://www.theory.nipne.ro/Brasov-Meso2014/presentation/Raduta_Adriana_prez.pdf
- C12.** D.S. Delion, R.J. Liotta, A. Dumitrescu,
Alpha-decay – a computational challenge, Computational challenges in nuclear physics, Sept. 15 - Oct. 10 2014, Stockholm, Sweden
<http://agenda.albanova.se/conferenceDisplay.py/abstractBookPerform?confId=3987>
- C.13.** V.V. Baran, D.S. Delion,
Pairing coherence length in nuclei, Advanced many-body and statistical methods in mesoscopic systems II, September 1 - 5, 2014, Brasov, Romania
http://www.theory.nipne.ro/Brasov-Meso2014/presentation/Baran_Virgil_Jr_prez.pdf

- C.14.** A. Dumitrescu, D.S. Delion,
Systematics of the α -decay fine structure in even-even nuclei,
Advanced many-body and statistical methods in mesoscopic systems II,
September 1 - 5, 2014, Brasov, Romania
http://www.theory.nipne.ro/BrasovMeso2014/presentation/Dumitrescu_Alexandru_prez.pdf
- C.15.** D.S. Delion, V.V. Baran,
Pairing versus quarteting coherence length,
From nuclear structure to particle-transfer reactions and back II
Nov. 10-14, 2014, Trento, Italy
- C.16.** A. Dumitrescu, D.S. Delion,
Systematics of the α -decay fine structure in even-even nuclei,
XIX International Conference of Young Scientists and Specialists,
February 16-20, 2015, Dubna, Russia
http://omus.jinr.ru/conference2015/participants_en.php#section3
- C.17.** V.V. Baran D.S. Delion,
Spatial properties of pairing and quarteting correlations in nuclear systems,
International Conference Nucleus-nucleus 2015
June 21-26, 2015, Catania, Italy
[https://ahgenda.infn.it/getFile/access?
contribId=352&sessionId=10&resId=0&materialId=slides&confId=5235](https://ahgenda.infn.it/getFile/access?contribId=352&sessionId=10&resId=0&materialId=slides&confId=5235)
- C.18.** D.S. Delion, A. Dumitrescu, V.V. Baran,
Alpha decay versus alpha clustering,
International Conference "Clustering effects of nucleon in nuclei and quarks
in multi-quark states", 28.03-22.04.2016, Beijing, China
<http://www.kitpc.ac.cn/files/activities/PC20160328/report/Delion-Beijing-16.pdf>
- C.19.** D.S. Delion,
Proton-neutron correlations above ^{100}Sn ,
Carpathian Summer School of Physics 2016 - Exotic Nuclei and Nuclear /
Particle Astrophysics (VI), June 29, July 6, 2016, Sinaia, Romania,
[http://www.nipne.ro/indico/getFile.py/accesscontribId=17&resId=0&materialId=slides&
confId=325](http://www.nipne.ro/indico/getFile.py/accesscontribId=17&resId=0&materialId=slides&confId=325)