

# *Professional Curriculum Vitae*

## **of Dr. Nadia Tsoneva**

**Full name: Dr. Nadezhda Tsoneva Larionova**  
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### **BRIEF BIOGRAPHICAL SKETCH**

I am a research and development professional with team leadership skills and large experiences in basic and theoretical nuclear physics and related fields. I have strong abilities in generating new ideas, developing innovative research proposals which initiate new areas of research. In particular, my expertise in nuclear structure theory, trouble shooting and organizational activities were useful in many international research projects and collaborations. For more than 15 years, after my promotion in theoretical nuclear physics (2001) in the Institute for Nuclear Research and Nuclear Energy (INRNE), Bulgarian Academy of Sciences, Sofia, Bulgaria, I perform a highest quality research work as a scientific worker in the group of Prof. Dr. H. Lenske, at the Institut für theoretische Physik, Universität Giessen, Germany and recently also at Frankfurt Institute for Advanced Studies (FIAS), D-60438 Frankfurt am Main, Germany, in the group of Prof. Dr. M. Bleicher. Presently, I am assistant professor at Extreme light infrastructure-nuclear physics (ELI-NP), Bucharest.

As a theorist I am involved in developing of advanced nuclear structure models, numerical calculations, and their application to a broad spectrum of physical systems and processes. In particular, over the last years I have been working in the field of nuclear many-body theory, focusing on the theory of stable and exotic nuclei. An important step forward in understanding the dynamics of atomic nuclei at the limits of existence was achieved by newly developed theoretical microscopic approach based on density functional theory (DFT) and advanced quasiparticle-random-phase-approximation (QRPA) and multi-phonon techniques. Recently, the latter is used as the appropriate theoretical scheme of high predictive power for predictions of new modes of nuclear excitations as well as for exploratory studies of astrophysical reaction rates and processes for stellar nucleosynthesis. In this respect, it should be pointed as one of my most outstanding results, the theoretical predictions of a new modes of nuclear excitations, called pygmy quadrupole resonance. The latter was recently also experimentally observed by three independent experiments performed at Legnaro National Laboratory, Italy, Kernfysisch Versneller Instituut in Groningen, the Netherlands and at the S-DALINAC in Darmstadt, Germany and the University of Köln, Germany. Very good agreement with the theoretical prediction was found. Furthermore, I have additional strengths and strong motivation in teaching, coaching and mentoring at high school and university levels. In the course of my career, I have published 30 peer-reviewed papers and over 35 additional international conference articles and preprints (total number of over 65 publications). I have spoken at more than 60 seminars, talks and invited talks at local and international meetings. I have prepared two lecture courses on Nuclear Structure, Nuclear Astrophysics and Cosmology which I have given 5 semesters to MSc students at the University of Giessen.

In addition, I am a referee of the prestigious physical journals Physical Review Letters, Physical Review C, Nuclear Physics A and European Physics Letters.

## SCIENTIFIC INTERESTS AND EXPERIENCE

### Theoretical Nuclear Physics/Astrophysics      Teaching

- Theoretical and Basic Nuclear Physics
- Nuclear Spectroscopy
- Microscopic Nuclear Models
- Pygmy and Giant Resonances
- Exotic nuclei
- Software development
- Nuclear Astrophysics
- Laser Physics
- Medical Physics
- Simulations of the Transmutation of Nuclear Wastes
- Numerical Calculations
- Statistical Analyses
- Teaching, Coaching, Mentoring

### EDUCATION

**1996-2000** PhD student, *Theoretical Nuclear Physics*, Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences, 1784 Sofia, Bulgaria, 20.06.2000: **PhD thesis in theoretical nuclear physics: 'Investigations of the interaction between collective and non-collective excitations in atomic nuclei observed in processes of inelastic scattering and photonuclear reactions'**, supervisor Prof. Dr. Ch. Stoyanov.  
**12/03/2001** Doctor Degree in Nuclear Physics was officially awarded

**1990-1995** Student at Physics department, Plovdiv State University 'P. Hilendarski', 4000 Plovdiv, Bulgaria.  
**MSc graduation 10.07.1995**: Qualifications: 1) Engineer Physics: Laser technique and technologies; 2) Teacher in Physics; Total average grade from all examinations: Excellent 5.79 /from maximal grade 6.00/.  
MSc thesis in theoretical nuclear physics: '*Estimation of the photoexcitation cross-sections in some Pb isotopes in the frame of Quasiparticle-Phonon Model*', supervisor Prof. Dr. Ch. Stoyanov., Institute for Nuclear Research and Nuclear Energy, Bulgarian Academy of Sciences, 1784 Sofia, Bulgaria. Grade on the MSc thesis: Excellent 6.00 /from maximal grade 6.00/.

**09/2017 – 10/2017** Advanced training in object oriented programming with C++/Microsoft Visual C++.Net at Alphatraining Bildungszentrum e.K., Giessen, Germany. Qualification: Programmer in object oriented programming with C++. Total grade: very good - 98 points (from maximal 100 points).

### MOTHERHOOD

**08.2000 – 04.2002**

### RESEARCH POSITIONS

- 04. 2000 - 08. 2000** researcher at the Institute for Nuclear Research and Nuclear Energy, Sofia, Bulgaria;
- 04. 2002 - 08. 2015** scientific worker at the Institut für Theoretische Physik, Universität Giessen, Germany in the group 'Nuclei and Hadrons' (chief: Prof. H. Lenske);
- 09. 2015 - 12. 2015** scientific worker at the Frankfurt Institute for Advanced Studies (FIAS), D-60438 Frankfurt am Main and the Institut für Theoretische Physik, Universität Giessen, Germany, (chief: Prof. Dr. M. Bleicher);
- 01/2016 – 12/2016** wissenschaftlicher Kollaborateur an der Justus-Liebig Universität Giessen, Institut für Theoretische Physik, Gruppenleiter Prof. Dr. H. Lenske.
- 22. - 30. 07/2016** Visiting Fellow, Oak Ridge National Laboratory (ORNL), US Department of Energy science and energy, Knoxville, Tennessee, United States;

**13. - 20. 03/2017** Visiting Fellow, Institute for Nuclear Theory (INT), Seattle, Washington, United States.  
**11/2018 – present** Assistant Professor at Extreme Light Infrastructure – Nuclear Physics (ELI-NP), Bucharest, Romania.

### PROFESSIONAL EXPERIENCE

**09.1996 - 12.1996** invited researcher in the Laboratory of Theoretical Physik, JINR, Dubna, Russia;  
**03.1997 - 05.1997** invited researcher in LNS-INFN, Catania, Italy;  
**03.1998 - 05.1998** invited researcher in LNS-INFN, Catania, Italy;  
**09.1998 - 12.1998** invited researcher in the Laboratory of Theoretical Physik, JINR, Dubna, Russia;  
**03.1999 - 05.1999** invited researcher in LNS-INFN, Catania, Italy;  
**03.2000 - 04.2000** invited researcher in LNS-INFN, Catania, Italy;  
**03.2003** invited visitor in Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Dresden, Germany;  
**03.2007** invited visitor in Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Dresden, Germany;  
**04.2011** invited researcher in TUNL, Duke University, Durham, NC, USA.

### PROFESSIONAL RESPONSIBILITIES/ACTIVITIES

- Development of high quality research activities independently and/or in collaboration with others as part of a larger research team in accordance with a specific project plan
- Development of innovative research proposals as a part of a broader programme, contributing to the submission of funding bids, and gaining positive reviews
- Publishing original research in prestigious scientific journals
- Referees of articles from prestigious research physics journals: Physical Review Letters, Physical Review C, Nuclear Physics A and European Physics Letters.
- Participations and talks in appropriate conferences for the purpose of disseminating research and for personal development
- Support of the teaching of the Physical Faculty at the University of Giessen by lecturing, advisory, examination and individual work with BSc., MSc. and PhD students

### TEACHING EXPERIENCE

- Lecture courses and exercises given at the Physics Faculty, Giessen University, Germany
  - 1) Winter Semester 2011/12 - Nuclear structure theory (2 hours/weekly lectures, MSc. students);
  - 2) Summer Semester 2012 - Nuclear structure and Reaction theory (2 hours/weekly lectures, MSc. students);
  - 3) Winter Semester 2011/12 - Theoretical nuclear astrophysics (2 hours/weekly lectures, MSc. students);
  - 4) Winter Semester 2013/14 - Nuclear astrophysics (1 hour/weekly exercises, MSc. students);
  - 5) Winter Semester 2014/15 - Electrodynamics (preparation of exercises and examinations, BSc. students);
  - 6) Summer Semester 2015 - Nuclear astrophysics and cosmology (a project work with MSc. students).
- Advisory of MSc diploma and PhD students
  - 1) Michael Hofmann, MSc student at Physics Faculty, Universität Giessen, individual project work on the lecture course 'Nuclear astrophysics and cosmology', Summer Semester 2015.
- Theoretical support of the PhD work of experimental nuclear physics students
  - 1) Markus Scheck ( graduated PhD in 2002 at the Institut für Strahlenphysik, Universität Stuttgart, supervisor Prof. Dr. U. Kneissl);
  - 2) Stephan Volz ( graduated PhD in 2006 at the Technischen Universität Darmstadt, Germany, supervisor Prof. Dr. A. Zilges);
  - 3) Banu Özel (graduated PhD in 2009 at the Technischen Universität Darmstadt, Germany, supervisor Prof. Dr. P. von Neumann-Cosel);
  - 4) Krishi Chayan, (PhD student at the Department of Physics, Duke University, Durham, North

- Carolina 27708, USA and Triangle Universities Nuclear Laboratory, Durham, North Carolina 27708, USA, in 2014, supervisor Prof. Dr. W. Tornow);
- 5) Vera Derya (graduated PhD in 2015 at the Institut für Kernphysik, Universität zu Köln, 50937 Köln, Germany, supervisor Prof. Dr. A. Zilges);
- 6) Mark Spieker (presently PhD student at the Institut für Kernphysik, Universität zu Köln, 50937 Köln, Germany, supervisor Prof. Dr. A. Zilges);
- 7) Simon Pickstone (presently PhD student at the Institut für Kernphysik, Universität zu Köln, 50937 Köln, Germany, supervisor Prof. Dr. A. Zilges).

## MEMBERSHIPS

- Member of the German Physical Society.

## A LIST OF ACHIEVEMENTS

### Publications published in major , peer-reviewed journals

1. M. Grinberg, Ch. Stoyanov, **N. Tsoneva**,  
*Interplay of collective and noncollective modes at low excitation energy in spherical nuclei*,  
Phys. of Elem. Part. and At. Nucl., vol. **29** part. 6, 1456-1498 (1998).
2. **N. Tsoneva**, A. I. Vdovin, Ch. Stoyanov, M. Grinberg,  
*Magnetic polarization and two-phonon states*,  
Rus. J. Nucl. Phys. **61** (1998) 816.
3. V. Yu. Ponomarev, Ch. Stoyanov, **N. Tsoneva**, M. Grinberg,  
*Boson forbidden low-energy E1-transitions in spherical nuclei*,  
Nucl. Phys. A **635**, 470 (1998).
4. **N. Tsoneva**, Ch. Stoyanov, V. Yu. Ponomarev, Yu. Gangrsky, N. P. Balabanov, A. P. Tonchev,  
*Population of isomers in the decay of the Giant Dipole Resonance*,  
Phys. Rev. C **61**, 044303 (2000).
5. M. Di Toro, V. Baran, M. Cabbibo, M. Collona, A. B. Larionov, **N. Tsoneva**,  
*The nuclear Giant Dipole Resonance under extreme conditions*,  
Phys. of Elem. Part. and At. Nucl. **31**, 878 (2000).
6. V. Baran, M. Cabbibo, M. Collona, M. Di Toro, **N. Tsoneva**,  
*Dipole Mode in Dissipative Heavy Ion Collisions*,  
Nucl. Phys. A **679**, 373 (2001).
7. Ch. Stoyanov, N. Lo Iudice, **N. Tsoneva**, M. Grinberg,  
*Properties of the Low-Lying Excited States in Even-Even Nuclei Around Closed Shell*,  
Bul. J. of Phys. **27**, 71 (2000).
8. Ch. Stoyanov, N. Lo Iudice, **N. Tsoneva**, M. Grinberg,  
*Properties of the Low-Lying Excited States in Even-Even Nuclei Around the Closed Shell N=82*,  
Rus. J. Nucl. Phys. **64**, 1 (2001).
9. A. G. Belov, Yu. Gangrsky, L. M. Melnikova, V. Yu. Ponomarev, **N. Tsoneva**, Ch. Stoyanov, A. Tonchev, and N. Balabanov,  
*Excitation of Isomeric  $1h_{11/2}$  States in Nuclear Reactions Induced by  $\gamma$ -Rays and Neutrons*

and in  $\gamma$ -Decay,

Physics of Atomic Nuclei, **64**, 1901 (2001).

10. **N. Tsoneva**, H. Lenske, Ch. Stoyanov,

*Pygmy dipole resonances as a manifestation of the structure of the neutron-rich nuclei,*

Nucl. Phys. A **731**, 273 (2004).

11. **N. Tsoneva**, H. Lenske, Ch. Stoyanov,

*Probing the nuclear neutron skin by low-energy dipole modes,*

Phys. Lett. B **586**, 213 (2004).

12. M. Scheck, H. von Garrel, **N. Tsoneva**, D. Belic, P. von Brentano, C. Fransen, A. Gade, J. Jolie, U. Kneissl, C. Kofstall, A. Linnemann, A. Nord, N. Pietralla, H.H. Pitz, F. Stedile, Ch. Stoyanov, and V. Werner,

*Dipole strength distributions in the stable Ba isotopes  $^{134,136,138}\text{Ba}$ : A study in the mass region of a nuclear shape transition,*

Phys. Rev. C **70**, 044319 (2004).

13. S. Volz, **N. Tsoneva**, M. Babilon, M. Elvers, J. Hasper, R.D. Herzberg, H. Lenske, A. Zilges,

*The photoresponse of stable  $N=82$  nuclei below 10 MeV,*

Nucl. Phys. A **779**, 1 (2006).

14. **N. Tsoneva**, H. Lenske,

*Pygmy dipole resonances in the tin region,*

Phys. Rev. C **77**, 024321 (2008).

15. R. Schwengner, G. Rusev, **N. Tsoneva**, N. Benouaret, R. Beyer, M. Erhard, E. Grosse, A. R. Junghans, J. Klug, K. Kosev, H. Lenske, C. Nair, K. D. Schilling, and A. Wagner,

*Pygmy dipole strength in  $^{90}\text{Zr}$ ,*

Phys. Rev. C **78**, 064314 (2008).

16. A. P. Tonchev, S. L. Hammond, H. J. Karwowski, J. H. Kelley, E. Kwan, H. Lenske, G. Rusev, W. Tornow, **N. Tsoneva**,

*Spectral Structure of the Pygmy Dipole Resonance,*

Phys. Rev. Lett. **104**:072501 (2010).

17. **N. Tsoneva**, H. Lenske,

*Pygmy Quadrupole Resonance in Skin Nuclei,*

Phys. Lett. B **695**, 174 (2011).

18. G. Rusev, **N. Tsoneva**, F. Dönau, S. Frauendorf, R. Schwengner, A. P. Tonchev, A. S. Adekola, S. L. Hammond, C. Huijbregtse, J. H. Kelley, E. Kwan, H. Lenske, W. Tornow, and A. Wagner,

*Fine Structure of the Giant M1 Resonance in  $^{90}\text{Zr}$ ,*

Phys. Rev. Lett. **110**, 022503 (2013).

19. R. Schwengner, R. Massarczyk, G. Rusev, **N. Tsoneva**, D. Bemmerer, R. Beyer, E. Birgersson, M. Erhard, R. Hannaske, A. R. Junghans, K. Kosev, E. Kwan, H. Lenske, M. Marta, A. Maltic, C. Nair, R. Raut, K. D. Schilling, A. Tonchev, W. Tornow, and A. Wagner,

*Pygmy Dipole strength in  $^{86}\text{Kr}$  and systematics of  $N=50$  isotones,*

Phys. Rev. C **87**, 024306 (2013).

20. R. Raut, A. P. Tonchev, G. Rusev, W. Tornow, C. Iliadis, M. Lugaro, J. Buntain, S. Goriely, J. H. Kelley, R. Schwengner, A. Banu, and **N. Tsoneva**,  
*Cross-Section Measurements of the  $^{86}\text{Kr}(\gamma,n)$  Reaction to Probe the  $s$ -Process Branching at  $^{85}\text{Kr}$* ,  
Phys. Rev. Lett. **111**, 112501 (2013).
21. B. Özel-Tashenov, J. Enders, H. Lenske, A. M. Krumbholz, E. Litvinova, P. von Neumann-Cosel, I. Poltoratska, A. Richter, G. Rusev, D. Savran, and **N. Tsoneva**,  
*Low-energy dipole strength in  $^{112,120}\text{Sn}$* ,  
Phys. Rev. C **90**, 024304 (2014).
22. **N. Tsoneva**, H. Lenske,  
*Nuclear Dynamics at the Particle Threshold*,  
Nucl. Phys. Rev. **32**, 130 (2015).
23. **N. Tsoneva**, S. Goriely, H. Lenske, R. Schwengner,  
*Pygmy resonances and radiative nucleon captures for stellar nucleosynthesis*,  
Phys. Rev. C **91**, 044328 (2015).
24. Krishichayan, M. Bhike, W. Tornow, G. Rusev, A.P. Tonchev, **N. Tsoneva**, H. Lenske,  
*Polarized photon scattering of  $^{52}\text{Cr}$ : determining the parity of dipole states*,  
Phys. Rev. C **91**, 044318 (2015).
25. L. Pellegri, A. Bracco, **N. Tsoneva**, R. Avigo, G. Benzoni, N. Blasi, S. Bottoni, F. Camera, S. Ceruti, F.C.L. Crespi, A. Giaz, S. Leoni, H. Lenske, B. Million, A.I. Morales, R. Nicolini, O. Wieland, D. Bazzacco, P. Bednarczyk, B. Birkenbach, M. Ciemała, G. de Angelis, E. Farnea, A. Gadea, A. Görge, A. Gottardo, J. Grebosz, R. Isocrate, M. Kmiecik, M. Krzysiek, S. Lunardi, A. Maj, K. Mazurek, D. Mengoni, C. Michelagnoli, D.R. Napoli, F. Recchia, B. Siebeck, S. Siem, C. Ur, and J.J. Valiente-Dobón,  
*A multitude of  $2^+$  discrete states in  $^{124}\text{Sn}$  via the  $(^{17}\text{O}, ^{17}\text{O}'\gamma)$  reaction: pygmy quadrupole states*,  
Phys. Rev. C **92**, 014330 (2015);
26. M. Spieker, **N. Tsoneva**, V. Derya, J. Endres, D. Savran, P. Butler, M. N. Harakeh, S. Harissopulos, R.-D. Herzberg, R. Krücken, A. Lagoyannis, H. Lenske, N. Pietralla, L. Popescu, M. Scheck, F. Schlüter, K. Sonnabend, V.I. Stoica, H.J. Wörtche, A. Zilges,  
*The Pygmy Quadrupole Resonance and Neutron-Skin Modes in  $^{124}\text{Sn}$* .  
Phys. Lett. B **752**, 102 (2016).
27. V. Derya, **N. Tsoneva**, T. Aumann, M. Bhike, J. Endres, M. Gooden, A. Hennig, J. Isaak, H. Lenske, B. Löher, N. Pietralla, D. Savran, W. Tornow, V. Werner, and A. Zilges  
*Decay of quadrupole-octupole  $1^-$  states in  $^{40}\text{Ca}$  and  $^{140}\text{Ce}$* .  
Phys. Rev. C **93**, 034311 (2016).
28. **N. Tsoneva**, H. Lenske  
*Energy–Density Functional Plus Quasiparticle–Phonon Model Theory as a Powerful Tool for Nuclear Structure and Astrophysics*.  
Physics of Atomic Nuclei, Vol. **79**, No. 6, pp. 885–903 (2016).
29. **N. Tsoneva**, H. Lenske  
*New evidences on the existence of pygmy quadrupole resonance in  $^{124}\text{Sn}$*

GSI Scientific Report 2015, MU-THEORY-6, p. 260 / GSI Report 2016-1 DOI:10.15120/GR-2016-1; <https://repository.gsi.de/record/189686/files/GSI-Report-2016-1.pdf>.

30. A.P. Tonchev, **N. Tsoneva**, C. Bhatia, C.W. Arnold, S. Goriely, S.L. Hammond, J.H. Kelley, E. Kwan, H. Lenske, J. Piekarewicz, R. Raut, G. Rusev, T. Shizuma, W. Tornow

*Pygmy and core polarization dipole modes in  $^{206}\text{Pb}$ : Connecting nuclear structure to stellar nucleosynthesis*

Phys. Lett. **B** 773, 20 (2017).

31. **N. Tsoneva**, H. Lenske

*Entanglement of pygmy skin and core polarization modes in  $^{206}\text{Pb}$*

GSI SCIENTIFIC REPORT 2016, RESEARCH-THEORY-1, p. 333,

DOI:10.15120/GR-2017-1, <http://repository.gsi.de/record/201280/files/GSI-REPORT-2017-1.pdf>

32. **N. Tsoneva**, M. Spieker, H. Lenske, A. Zilges

*Fine structure of the pygmy quadrupole resonance in  $^{112,114}\text{Sn}$*

Nuclear Physics A **990**, 183-198 (2019). <https://doi.org/10.1016/j.nuclphysa.2019.07.008>

33. Horst Lenske and **Nadia Tsoneva**,

*Dissolution of shell structures and the polarizability of dripline nuclei,*

Eur. Phys. J. A (2019) 55: 238. <https://doi.org/10.1140/epja/i2019-12811-6>.

37. **N. Tsoneva**,

*Electromagnetic Transitions and Branching Ratios as a Tool for Investigating the Fine Structure of Nuclear Excitations,*

Bul. J. Phys. vol.46 no.4 (2019), pp. 395-404. <http://bjp-bg.com/paper.php?id=1203>.

### Publications published as conference proceedings, reports and preprints

1. Ch. Stoyanov, M. Grinberg, **N. Tsoneva**,

*Examples of coupling between isoscalar and isovector modes in atomic nuclei,*

Conf. Proc. 'Nuclear structure and Related Topics', Dubna, p. 184-190 (1997).

2. **N. Tsoneva**, A. I. Vdovin, Ch. Stoyanov, M. Grinberg,

*Magnetic polarization and two-phonon states,*

JINR preprint, E4-97-211, Dubna (1997).

3. **N. Tsoneva**, M. Grinberg, Ch. Stoyanov,

*Two-phonon states in even-even  $N=84$  isotones,*

Conf. Proc. 'Capture Gamma-Ray Spectroscopy and Related Topics', ed. by G. L. Molnar, T. Belgya, and Zs. Revay, p. 76-79, Springer (1997).

4. M. Di Toro, **N. Tsoneva**, M. Cabbibo, V. Baran, M. Collona, A. B. Larionov, S. Maccarone, *The Giant Dipole Resonance as a probe of nuclear structure under extreme conditions*, Acta Physica Polonica B **30**, 1331-1352 (1998).
5. M. Di Toro, V. Baran, M. Collona, G. Fabbri, A.B. Larionov, S. Maccarone and **N. Tsoneva**, *Charge Asymmetry in Nuclear Dynamics*, Conf. Proc. 'Structure and stability of nucleon and nuclear systems', Predeal, ed. A. A. Raduta, World Sci., p.193-208 (1999).
6. Ch. Stoyanov, V. Yu. Ponomarev, **N. Tsoneva**, and M. Grinberg, *The influence of GDR on the low-energy E1 transitions in spherical nuclei*, Nucl. Phys. A **649**, 93c-96c (1999).
7. **N. Tsoneva**, A. B. Larionov, Ch. Stoyanov, S. Marinova, *Investigations on the Preequilibrium Neutron Emission and Fragments Production in the Reaction  $p(0.800\text{GeV})+Pb$* , Bul. J. Phys. **27**, 43 (2000).
8. **N. Tsoneva**, Ch. Stoyanov, Yu. P. Gangrsky, V. Yu. Ponomarev, N. P. Balabanov, and A. P. Tonchev *Isomeric ratios in odd  $N=81$  isotones*, AIP Conf. Proc. 529, 753 (2000).
9. H. Lenske, C. M. Keil, **N. Tsoneva**, *Correlation dynamics in dripline nuclei*, Prog. in Part. and Nucl. Phys. **53**, 153 (2004).
10. **N. Tsoneva**, H. Lenske, Ch. Stoyanov, *Low-Energy Dipole Excitations as a Signature for Neutron Skin*, Proc. of Int. Workshop XXXII on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, 11. - 17. January, 2004, GSI, ed. by M. Buballa et al., p.177 (2004).
11. H. Lenske, C. Keil and **N. Tsoneva**, *Interactions and response functions in exotic nuclei*, Proc. of Int. Workshop XXXII on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, 11. - 17. January, 2004, GSI, ed. by M. Buballa et al., p.151 (2004).
12. Horst Lenske, Urnaa Badarch, Patrick Konrad, Sonja Orrigo, **N. Tsoneva**, *Covariant ab initio Approach to Nuclear Matter, Nuclei and Neutron Stars*, Prepared for Conference: C06-06-12.9, p. 10 (2006).
13. **N. Tsoneva**, H. Lenske, *Pygmy dipole resonance in exotic nuclei*, Progress in Particle and Nuclear Physics, **59** (1), 317 (2007).
14. A. P. Tonchev, C. Angell, M. Boswell, C. R. Howell, H. J. Karwowski, J. H. Kelley, W. Tornow, and **N. Tsoneva**, *Low-Energy Dipole Modes of Excitation Below the Neutron Separation Energy*, AIP Conf. Proc. 819 350 (2006), doi:10.1063/1.2187883.
15. A. P. Tonchev, C. Angell, M. Boswell, A. Chyzh, C. R. Howell, H. J. Karwowski, J. H. Kelley, W. Tornow, **N. Tsoneva**, and Y. K. Wu, *Collective Dipole Excitations below the Giant Dipole Resonance at  $HI\gamma S$* ,



AIP Conf. Proc. 891, 339 (2007), doi:10.1063/1.2713535.

16. H. Lenske, U. Badarch, P. Konrad, **N. Tsoneva**, S. Orrigo,  
*Density functional theory for nuclei and hypernuclei*,

International School of Nuclear Physics: 28th Course: Radioactive Beams, Nuclear Dynamics and Astrophysics, Erice, Sicily, Italy, 16-24 Sep 2006.

Prog. Part. Nucl. Phys. **59**, 114-121 (2007).

17. **N. Tsoneva**, H. Lenske,

*Low-energy dipole excitations in nuclei at the  $N=50$ ,  $N=82$  and  $Z=50$  shell closures as signatures for a neutron skin*,

Contributed to 3rd Nuclear Physics in Astrophysics Conference and 21st International Nuclear Physics Divisional Conference of the European Physical Society, 26-31 Mar 2007, Dresden, Germany.

J. Phys. G **35**, 014047 (2008).

18. **N. Tsoneva**, H. Lenske,

*Theoretical investigations of isoscalar, isovector and mixed symmetry states in skin nuclei*,

Conf. proc. of the Thirteenth International Symposium on 'Capture Gamma-Ray Spectroscopy and Related Topics', Cologne (Germany) 2008,

published by AIP Conf. Proc. 1090, 409 (2009).

19. A. P. Tonchev, C. Angell, S. Hammond, A. Hutcheson, H.J. Karwowski, J.H. Kelley, E. Kwan, G. Rusev, W. Tornow, and **N. Tsoneva**,

*Recent results from the excitation of dipole states at the HIγS Facility*,

Conf. proc. of the Thirteenth International Symposium on 'Capture Gamma-Ray Spectroscopy and Related Topics', 25-29 August, 2008, Cologne, Germany,

published by AIP Conf. Proc. 1090, 74 (2009).

20. **N. Tsoneva**, H. Lenske,

*Multipole response of skin nuclei*,

Proc. of the Int. Conf. 'Nucl. structure and related topics', June 30-July 4, 2009, Dubna, Russia, edited by A. Vdovin, V. Voronov, R. Jolos, Vol.2, p. 172-180 (2009).

21. **N. Tsoneva**, H. Lenske,

'Spectroscopic features of low-energy excitations in skin nuclei'

Conf. Proc. of the Int. Symposium 'Frontiers of Researches in Exotic Nuclear Structures - Niigata2010', 1. - 4. March 2010, Tokamachi, Niigata, Japan,

published in Mod. Phys. Lett. A25:1779-1782 (2010).

22. **N. Tsoneva**, H. Lenske,

*Pygmy Resonances in Exotic Nuclei*,

Conf. Proc. of 29 International Workshop on Nuclear Theory (IWNT), 20. - 26. June 2010, Rila Mountains, Bulgaria, Nuclear theory, Vol. 29 (2010) pp. 152-161, eds. A. Georgieva, N. Minkov, Heron Press, Sofia (2010).

23. H. Lenske, S. Orrigo, **N. Tsoneva**,

*Density Functional Theory for Reactions of Astrophysical Interest*,

Proceedings of the International School of Nuclear Physics: 32-nd Course Particle and Nuclear Astrophysics Erice-Sicily, 16. - 24. September (2010).

published in Prog. Part. Nucl. Phys. 66, 368 (2011).

24. A.P. Tonchev, S.L. Hammond, J.H. Kelley, E. Kwan, H. Lenske, R. Raut, G. Rusev, W. Tornow, **N. Tsoneva**,

*Coarse and fine structure of the pygmy dipole resonance*,

Conf. Proc. of the 24th International Nuclear Physics Conference (INPC 2010), Vancouver, Canada, 4-9 July 2010, Published in J. Phys. Conf. Ser. 312:092058, 6 pp (2011).

25. **N. Tsoneva**, H. Lenske,

*Applications of Energy Density Functional Theory to Skin Nuclei and Astrophysical Reactions*,

Proceedings of the Fourteenth International Symposium on 'Capture Gamma-Ray Spectroscopy and Related Topics', University of Guelph, Guelph, Ontario, Canada, 28. August - 2. September 2011, published by World Scientific (Singapore) (2013).

26. **N. Tsoneva**, H. Lenske,

*Density Functional Theory Method for Investigation of Skin Nuclei*,

Proceedings of XIX International School on Nuclear Physics, Neutron Physics and Applications, 19. - 25. September 2011, Varna, Bulgaria,

J. Phys.: Conf. Ser. 366, 012043 (2012);

doi:10.1088/1742-6596/366/1/012043.

27. **N. Tsoneva**, H. Lenske,

*Nuclear pygmy modes and the dynamics of the nuclear skin*,

Proceedings of the Int. conference 'Nuclear structure and related topics'-NSRT'12, 2-7 July 2012, Dubna, Russia;

EPJ Web of Conferences 38, 03002 (2012);

<http://dx.doi.org/10.1051/epjconf/20123803002>.

28. **N. Tsoneva**, H. Lenske,

*New modes of nuclear excitations*,

INPC 2013 conf. proc., Firenze (Italy) 2-7 June 2013;

EPJ Web of Conferences 66, 02104 (2014);

DOI: <http://dx.doi.org/10.1051/epjconf/20146602104>.

29. **N. Tsoneva**, H. Lenske

*Theory of Nuclear Excitation and their Astrophysical Relevance*

GSI Report 2014-1, p. 255 (2014); doi:10.15120/GR-2014-1-THEORY-03.

30. **N. Tsoneva**, H. Lenske,

*Pygmy resonances and nucleosynthesis*,

EPJ Web of Conferences **93**, 01021 (2015).

31. **N. Tsoneva**, M. Bhike, H. Lenske, Krishichayan, G. Rusev, A.P. Tonchev, W. Tornow,

*Low-energy electric and magnetic dipole excitations in  $^{52}\text{Cr}$*

GSI Scientific Report 2015, DOI:10.15120/GR-2015-1-MU-NUSTAR-GS-06.

32. **N. Tsoneva**, H. Lenske,

*Impact of low-energy multipole excitations and pygmy resonances on radiative nucleon captures*,

Proceedings of the Int. conference 'Nuclear structure and related topics' (NSRT15), 13-19 July 2015,

Dubna, Russia;

EPJ Web of Conferences 107, 05001 (2016); DOI: 10.1051/epjconf/201610705001.

33. H. Lenske, M. Dhar, **N. Tsoneva**, and J. Wilhelm

*Exotic nuclear matter*;

Proceedings of the Int. conference 'Nuclear structure and related topics' (NSRT15), 13-19 July 2015, Dubna, Russia;

EPJ Web of Conferences 107, 10001 (2016); DOI: 10.1051/epjconf/201610710001.

34. A.P. Tonchev, J.E. Escher, N. Scielzo, P. Bedrossian, R.S. Ilieva, P. Humby, N. Cooper, P.M. Goddard, V. Werner, W. Tornow, G. Rusev, J.H. Kelley, N. Pietralla, M. Scheck, D. Savran, B. Löher, S.W. Yates, B.P. Crider, E.E. Peters, **N. Tsoneva**, and S. Goriely

*Capture cross sections on unstable nuclei*,

EPJ Web of Conferences 146, 01013 (2017), DOI: 10.1051/epjconf/201714601013

35. A.P. Tonchev, **N. Tsoneva**, S. Goriely, C. Bhatia, C.W. Arnold, S.L. Hammond, J.H. Kelley, E. Kwan, H. Lenske, J. Piekarewicz, R. Raut, G. Rusev, T. Shizuma and W. Tornow

*Astrophysical relevance of the low-energy dipole strength of  $^{206}\text{Pb}$* ,

EPJ Web of Conferences 178, 04003 (2018), <https://doi.org/10.1051/epjconf/201817804003CGS16>

36. **N. Tsoneva**,

*Pygmy and giant resonances: connecting the nuclear structure to stellar astrophysics*,

EPJ Web of Conferences 194, 04001 (2018), <https://doi.org/10.1051/epjconf/201819404001>

[https://www.epj-conferences.org/articles/epjconf/pdf/2018/29/epjconf\\_nsrt2018\\_04001.pdf](https://www.epj-conferences.org/articles/epjconf/pdf/2018/29/epjconf_nsrt2018_04001.pdf).

**Over 1100 citations of the author's publications are detected.**

## SELECTED CONFERENCE TALKS AND SEMINARS

1) Invited Talk: '*Constraining the Structure of Nuclear Excitations by Electromagnetic Transitions and Branching ratios*',

3rd Conference on "Microscopic Approaches to Nuclear Structure and Reactions (Gogny Conference 2019)", Lawrence Livermore National Laboratory, Livermore, California, USA.

<http://www.cvent.com/events/microscopic-approaches-to-nuclear-structure-and-reactions/event-summary-13204c802cd44f95bd1b99e7c8c9da85.aspx>.

2) Invited Talk: '*Electromagnetic Transitions and Branching Ratios: a Tool for Investigating the Fine Structure of Nuclear Excitations*',

International Workshop "Shapes and Dynamics of Atomic Nuclei: Contemporary Aspects", 3-5 October 2019, Sofia, Bulgaria.

<http://ntl.inrne.bas.bg/events/sdanca19/programme.html>.

3) Invited Talk: 'Fine Structure of the Pygmy Quadrupole Resonance'

7th Workshop on Nuclear Level Density and Gamma Strength, Oslo, May 27 - 31, 2019.

<http://tid.uio.no/workshop2019/program.html>

4) Invited Talk: '*Pygmy and giant resonances: connecting the nuclear structure to stellar astrophysics*' at International Conference "NUCLEAR STRUCTURE AND RELATED TOPICS" (NSRT18), organized by the Bogoliubov Laboratory of Theoretical Physics of the Joint Institute for Nuclear Research and held in Burgas (Bulgaria), 3-9 June, 2018;

<http://theor.jinr.ru/~nsrt18/>

3) A talk: '*Spectral features of Electric and Magnetic Dipole and Quadrupole Modes*' at **Nuclear Photonics 2018**, June 24-29, 2018, Brasov, Romania;

<http://nuclearphotonics2018.eli-np.ro/>

4) Invited Talk: '*Nuclear Exotic Modes and Their Impact on Astrophysical Observables*' at Institute for Nuclear Theory (INT) Workshop INT-17-1a 'Toward Predictive Theories of Nuclear Reactions Across the Isotopic Chart', February 27 - March 31, 2017, Seattle, Washington, USA.

[http://www.int.washington.edu/talks/WorkShops/int\\_17\\_1a/People/Tsoneva\\_N/Tsoneva.pdf](http://www.int.washington.edu/talks/WorkShops/int_17_1a/People/Tsoneva_N/Tsoneva.pdf)

5) A Talk: '*Energy-density functional plus multi-phonon theory as a powerful tool for nuclear structure and astrophysics*' at Nuclear Structure 2016 conference, hosted by the Physics Division of Oak Ridge National Laboratory (ORNL), on July 24 - 29, 2016, in downtown Knoxville, Tennessee, USA;

URL:[https://public.ornl.gov/conferences/ns2016/2\\_Tuesday/Session\\_3\\_Minitalks/NS2016\\_T3\\_11\\_Nadia\\_Tsoneva\\_Larionova\\_Minitalk.pdf](https://public.ornl.gov/conferences/ns2016/2_Tuesday/Session_3_Minitalks/NS2016_T3_11_Nadia_Tsoneva_Larionova_Minitalk.pdf)

6) A Talk: *Pygmy quadrupole resonance as a manifestation of the nuclear skin*,

Deutsche Physikalische Gesellschaft (DPG)-Frühjahrstagung, Darmstadt, 14. - 18. März 2016;

URL: <http://www.dpg-verhandlungen.de/year/2016/conference/darmstadt/part/hk/session/28>.

7) A Talk: *Pygmy Resonances and Stellar Nucleosynthesis*, at Int. Workshop: *Nucleosynthesis away from stability*, 7-9 Oct., 2015 - Goethe University Frankfurt, Frankfurt, Germany;

URL: <http://exp-astro.physik.uni-frankfurt.de/meetings/nugrid-2015/hprogram.php>.

8) Invited Talk: *Impact of Low-Energy Multipole Excitations and Pygmy Resonances on Radiative Nucleon Captures*,

International Conference 'Nuclear Structure and Related Topics' (NSRT15), 13. - 19. July 2015, Dubna, Russia;

URL: <http://theor.jinr.ru/~nsrt15/>.

9) Invited Talk: *Pygmy resonances and radiative nucleon captures for stellar nucleosynthesis*,

EURORIB'15 - Eur. Radioactive Ion Beam Conference 7 -12 June, 2015 at Hohenroda, Germany.

URL: <https://indico.gsi.de/getFile.py/access?resId=0&materialId=3&confId=2719>

10) Invited Talk: *The Nuclear Structure Input to Astrophysics*,

5-th Int. Workshop on Level Density and  $\gamma$  Strength, 19. - 25. May 2015, Oslo, Norway;

URL: [http://tid.uio.no/workshop2015/talks/Oslo2015\\_Tsoneva.pdf](http://tid.uio.no/workshop2015/talks/Oslo2015_Tsoneva.pdf)

11) A Talk: *The Nuclear Structure Input to Astrophysics*,

79. Jahrestagung der DPG und DPG-Frühjahrstagung, (Heidelberg, 23. - 27. März 2015);

URL:<http://www.dpg-verhandlungen.de/year/2015/conference/heidelberg/part/hk/session/16/contribution/1>

12) A Talk: *Low-Energy Multipole Excitations and Nucleosynthesis*,

International School of Nuclear Physics, 36th Course 'Nuclei in the Laboratory and in the Cosmos', 16. - 24. September, 2014, Erice-Sicily, Italy;

URL: [http://crunch.ikp.physik.tu-darmstadt.de/erice/2014/sec/program\\_2014.php](http://crunch.ikp.physik.tu-darmstadt.de/erice/2014/sec/program_2014.php)

13) A Talk: *Pygmy Resonances and Nucleosynthesis*,

15<sup>th</sup> Int. Symposium on 'Capture  $\gamma$ -Ray Spectroscopy and Related Topics (CGS15)', 25. - 29. August 2014, Dresden, Germany;

URL: <https://www.hzdr.de/db/Cms?pOid=42146>

14) Invited Plenary Talk: *Pygmy Resonances and Nucleosynthesis*,

4-th Int. Workshop on Nuclear Dynamics in Heavy-Ion Reactions (IWND2014), 15. - 20. August 2014, Lanzhou, China; URL: <http://iwnd2014.csp.escience.cn/dct/page/65580>

15) Invited Talk: *Structure and Dynamics of Nuclear Excitations at the Neutron Threshold*,

BLTP/JINR-SKLTP/CAS Joint Workshop 'Physics of Strong Interacting Systems', July 14-19, 2014, Dubna, Russia; URL: <http://theor.jinr.ru/meetings/2014/jwp14/Programme.pdf>

16) A Talk: *Nuclear Dynamics at the Particle Threshold*,

EGAN 2014 Workshop, 23. - 26. June 2014, GSI, Darmstadt;

URL: <https://indico.gsi.de/contributionDisplay.py?contribId=11&confId=2558&sessionId=10>

17) Speaker in the 'Physikalisches Kolloquium - Justus-Liebig-Universität Gießen: Temma 'New Modes of Nuclear Excitation', 28. April 2014, Giessen, Germany;

URL: <https://www.uni-giessen.de/fbz/fb07/fachgebiete/physik/veranstaltungen/physik>

18) A Talk: *Are the pygmy resonances important for Astrophysics?*,

78 DPG-Frühjahrstagung, 17. - 21. March 2014, Frankfurt, Germany;

URL: [http://www.dpg-](http://www.dpg-verhandlungen.de/year/2014/conference/frankfurt/part/hk/session/10/contribution/6)

[verhandlungen.de/year/2014/conference/frankfurt/part/hk/session/10/contribution/6](http://www.dpg-verhandlungen.de/year/2014/conference/frankfurt/part/hk/session/10/contribution/6)

19) Invited Plenary Talk: *Recent Developments in Theory of Nuclear Excitation*, NUSTAR Annual Meeting, 3-7 March 2014, Darmstadt, Germany;

URL: <https://indico.gsi.de/getFile.py/access?contribId=32&sessionId=21&resId=0&materialId=slides&confId=234>

20) Invited Talk: *Low Energy Electric and Magnetic Excitations Relevant to the Astrophysics*,

ECT\* workshop 'From nucl. structure to particle-transfer reactions and back', 4. - 8. Nov. 2013,

ECT\*, Trento, Italy; URL: [http://www.ectstar.eu/sites/www.ectstar.eu/files/programs/Program\\_0.pdf](http://www.ectstar.eu/sites/www.ectstar.eu/files/programs/Program_0.pdf)

21) A Talk: *New Modes of Nuclear Excitations*, 25-th Int. Nucl. Phys. Conference (INPC 2013), 2. - 7. June 2013, Firenze, Italy; URL:

<https://agenda.infn.it/conferenceDisplay.py/getPic?picId=26&confId=5998>

22) Invited Talk: *Low-energy Electric and Magnetic Excitations Relevant to the Astrophysics*,

4-th Int. Workshop on Level Density and Gamma Strength, 27. - 31. May 2013, Oslo, Norway;

URL: [http://tid.uio.no/workshop2013/talks/Oslo13\\_s123\\_Tsoneva.pdf](http://tid.uio.no/workshop2013/talks/Oslo13_s123_Tsoneva.pdf)

23) Invited Talk: *New Modes of Nuclear Excitations for Astrophysics*,

Astro Coffee ITP-FIAS joint meeting on Astrophysics, FIAS, Frankfurt, Germany, 23. April 2013;

URL: <https://astro.uni-frankfurt.de/astrocoffee/>

24) A Talk: *New modes of nuclear excitations in microscopic and collective model description*,

77. Jahrestagung der DPG und DPG-Frühjahrstagung, 4. - 8. March 2013, Dresden, Germany;

URL: [http://www.dpg-](http://www.dpg-verhandlungen.de/year/2013/conference/dresden/part/hk/session/20/contribution/4)

[verhandlungen.de/year/2013/conference/dresden/part/hk/session/20/contribution/4](http://www.dpg-verhandlungen.de/year/2013/conference/dresden/part/hk/session/20/contribution/4)

25) Invited talk: *New Modes of Nuclear Excitations for Astrophysics*,

24. Jan. 2013, Joint Nucl. Astrophysics Seminar (chaired by Almudena Arcones (TU Darmstadt /

GSI), Iris Dillmann (Justus Liebig Universität/ GSI Darmstadt), Camilla Juul Hansen (University of Heidelberg, ZAH)).

26) Invited talk: *Spectral distributions of E1 and M1 strengths at PDR energies*,

Int. Workshop on Nucl. Spectroscopy Frontiers at Magnetic Spectrometers, 22. - 27. Nov. 2012, Mostertsdrif Huis, Stellenbosch Institute for Advanced Studies, Stellenbosch, South Africa;

URL: [http://stias.ac.za/catering\\_unlimited/index\\_CU.html](http://stias.ac.za/catering_unlimited/index_CU.html)

27) A Talk: *Pygmy Resonances in Skin Nuclei*,

2-nd European Nuclear Physics Conference, 17. - 21. September 2012, Bucharest, Romania;

URL: <http://www.ifin.ro/eunpc2012/>

28) Invited Talk: *Fine Structure of the Pygmy Resonances*,

*VIII Tours Symposium on Nuclear Physics and Astrophysics*, 2. - 7. September 2012, Black Forest, Lenzkirch-Saig, Germany; URL: [https://www-win.gsi.de/Tours2012/files/scientific\\_program.pdf](https://www-win.gsi.de/Tours2012/files/scientific_program.pdf)

29) Invited Talk: *Nuclear pygmy modes and the dynamics of the nuclear skin*,

Int. Conf. 'Nuclear Structure and Related Topics' (NSRT12), 2. July - 7. July 2012, Dubna, Russia;

URL: <http://theor.jinr.ru/~nsrt12/>

30) Invited plenary talk: *New modes of low-energy excitations*,

DPG-Frühjahrstagung, 19. - 23. März 2012 (Physik der Hadronen und Kerne), Mainz, Germany;

URL: <http://www.dpg-verhandlungen.de/year/2012/conference/mainz/part/pv/session/13>

31) Invited Talk: *Theory of Pygmy resonances*,

*SARFEN - Structure and Reactions for Exotic Nuclei* (Collaboration Meeting), 26. - 27. March 2012, ECT\* - Trento, Italy; URL: <http://www.ectstar.eu/node/38>

32) A Talk: *Density Functional Theory Method for Investigation of Skin Nuclei*,

XIX International School on Nuclear Physics, Neutron Physics and Applications, 19. - 25. September, 2011, Varna, Bulgaria;

URL: <http://www.inrne.bas.bg/international-school-varna/index.php/archives/xix-international-school>

33) A Talk: *Applications of Energy Density Functional Theory to Skin Nuclei and Astrophysical Reactions*, 28. August - 2. September 2011, 14 Int. Symp. on 'Capture Gamma-Ray Spectroscopy and Related Topics', University of Guelph, Guelph, Ontario, Canada; URL: <http://cgs14.physics.uoguelph.ca/>

34) Invited Talk: *Low-energy Excitations and Giant Resonances in Skin Nuclei*,

3-rd Int. Workshop on Level Density and  $\gamma$ -Strength, 23. - 27. May, 2011, Oslo, Norway;

URL: <http://tid.uio.no/workshop2011/program.html>

35) Invited Seminar: *Applications of Energy Density Functional Theory to Skin Nuclei*,

13. May 2011, Institut für Kernphysik, Universität Köln, Germany; URL: <https://www.ikp.uni-koeln.de/students/>

36) Invited Seminar: *Density Functional Theory Method for Investigation of Skin Nuclei*,

12. April 2011, Duke University, Durham, NC, USA;

URL: <http://www.tunl.duke.edu/documents/public/tunll.pdf>

37) A Talk: *Quadrupole and other multipole excitations in skin nuclei*,

DPG Frühjahrstagung, 21. - 25. März 2011, Münster, Germany;

URL: <http://www.dpg-verhandlungen.de/year/2011/conference/muenster/static/hk9.pdf>

38) Invited Talk: *Pygmy Resonances in Exotic Nuclei*,

Workshop on  $\gamma$ -Strength and Level Density in Nuclear Physics and Nuclear Technology, 30. August - 3. September 2010, Dresden-Rossendorf, Germany; URL: <https://www.hzdr.de/db/Cms?pNid=2107>

39) Invited Talk: *Pygmy Resonances in Exotic Nuclei*,

29th International Workshop on Nuclear Theory (IWNT), 20. - 26. June 2010, Rila Mountains,

Bulgaria;

URL: <http://ntl.inrne.bas.bg/workshop/2010/programme.php>

40) A Talk: *Pygmy Resonances in Exotic Nuclei*,

EURORIB 2010, 6.-11. June 2010, Village de Vacances de Lamoura, France;

URL: <http://indico.cern.ch/event/61310/contributions/speakers>

41) A Talk: *Fine Structure of Low-Energy Excitations in Skin Nuclei*,

74. Jahrestagung der DPG und DPG Frühjahrstagung, 15. - 19. März 2010, Bonn, Germany;

URL: <http://www.dpg-verhandlungen.de/year/2010/conference/bonn/static/hk56.pdf>

42) Invited Talk *Spectroscopic Features of Low-Energy Excitations in Skin Nuclei*,

Int. Symp. 'Forefronts of Researches in Exotic Nuclear Structures - Niigata 2010', 1. - 4. March 2010, Tokamachi, Niigata, Japan;

URL: [http://ribfuser.riken.jp/RIBF\\_UG/Conferences/conferences\\_2010.html](http://ribfuser.riken.jp/RIBF_UG/Conferences/conferences_2010.html)

43) A Talk: *Multipole Response of Skin Nuclei*,

International Conference "Nuclear structure and related topics", 30. June - 4. July 2009, Dubna, Russia;

URL: <http://theor.jinr.ru/nsrt09/>

44) A Talk: *Electric and Magnetic Multipole Response of Exotic Nuclei*,

3-rd International Conference on "Collective Motion in Nuclei under Extreme Conditions" (COMEX 3), 2. - 5. June 2009, Mission Point Resort on Mackinac Island, Michigan, United States;

URL: [http://meetings.nsl.msui.edu/COMEX3/index.php?id=conference\\_details/program.php](http://meetings.nsl.msui.edu/COMEX3/index.php?id=conference_details/program.php)

45) A Seminar Talk at the 'Graduierten Kollegen' School:

*Multipole response of skin nuclei*, 29. Mai 2009, Institut für Theoretische Physik, Universität Giessen, Germany; URL: <https://www.uni-giessen.de/fbz/fb11/forschung/graduierte>

46) A Talk: *Low-Energy Dipole and Quadrupole States Related to Neutron Skins*,

DPG Frühjahrstagung, Bochum, Deutschland, 16. - 20. März 2009, First European Nuclear Physics Conference (Bochum, 2009); URL: <http://www.dpg-verhandlungen.de/year/2009/conference/bochum/static/hk71.pdf>

47) Invited talk: *Multipole response of skin nuclei*,

XL. Arbeitstreffen "Kernphysik" 26. Februar - 05. März 2009 in Schleching/Obb., Deutschland;

URL: [https://www-win.gsi.de/AK-Schleching2009/Teilnehmerliste\\_2009.pdf](https://www-win.gsi.de/AK-Schleching2009/Teilnehmerliste_2009.pdf)

48) A talk: *Theoretical investigations of isoscalar, isovector and mixed symmetry states in skin nuclei*,

13<sup>th</sup> Int. Symp. on Capt.  $\gamma$ -Ray Spectr. and Related Topics, 25-29 August 2008, Cologne, Germany;

URL: <http://www.ikp.uni-koeln.de/current/cgs13/doc/schedule.pdf>

49) A Talk: *Pygmy Dipole Strength in Exotic Nuclei*,

DPG Frühjahrstagung, Hadrons and Nuclei, TU Darmstadt, 10 - 15 March 2008, Germany;

URL: <http://www.dpg-verhandlungen.de/year/2008/conference/darmstadt/static/hk8.pdf>

50) A Talk: *Pygmy Dipole Response in Exotic Nuclei in Multi-Phonon Representation*,

Int. Workshop XXXVI on Gross Prop. of Nucl. and Nucl. Excitations 'Modern Aspects in Nuclear Structure and Reactions', January 13 - 19, 2008, Hirschegg, Kleinwalsertal, Austria;

URL: <http://theory.gsi.de/hirschegg/2008/Talks/Tsoneva.pdf>

51) Invited Talk: *Low-energy Dipole Excitations in Nuclei at the  $N=50$ ,  $82$  and  $Z=50$  Shell Closures as Signatures for a Neutron Skin*,

XXI Int. Nucl. Phys. Div. Conf. of the European Physical Society 'Nuclear Physics in Astrophysics III', 26. - 31. March 2007, Dresden-Rossendorf, Dresden, Germany;

URL: <https://www.hzdr.de/db/Cms?pNid=1446>

52) A Talk: *Low-energy dipole excitations as a manifestation of neutron and proton skins*,

DPG Frühjahrstagung, 12. - 16. März 2007, Fachverband: Hadronen und Kerne, Universität Giessen, Germany; URL: <http://giessen07.dpg-tagungen.de/index.html>

53) A Talk: *Theory of Pygmy Dipole Resonances in Exotic Nuclei*,

School on nuclear physics 'Radioactive Beams, Nuclear Dynamics and Nuclear Astrophysics', 16. - 24. September 2006, Erice; URL: [http://crunch.ikp.physik.tu-darmstadt.de/erice/past\\_schools.php](http://crunch.ikp.physik.tu-darmstadt.de/erice/past_schools.php)

54) A Talk: *The connection between Neutron Skins and Low-Energy Dipole Excitations*,

XVI International School on Nuclear Physics, Neutron Physics and Nuclear Energy, 19. - 26. September 2005, Varna, Bulgaria; URL: <http://www.phys.uni-sofia.bg/~ap/nsg/activities/conferences/>

55) A Seminar Talk at the 'Graduierten Kollegen' School: *'Nuclear structure in terms of multiphonon representation'*,

June 01, 2005, Institut für Theoretische Physik, Universität Giessen, Germany;

URL: <https://www.uni-giessen.de/fbz/fb11/forschung/graduierte>

56) Gruppenbericht: *Dipole strength distributions in neutron-rich nuclei*,

DPG Frühjahrstagung, March 8-12, 2004, University of Cologne, Germany;

URL: <http://www.dpg-verhandlungen.de/year/2004/conference/koeln/part/hk/session/19>

57) Invited talk: *Low-energy dipole excitations in exotic nuclei*,

NUSTAR Annual Meeting, 19 -21 February 2004, GSI Darmstadt, Germany;

URL: <http://www.fair-center.eu/for-users/experiments/nustar/>

58) A Talk: *Low-Energy Dipole Excitations as a Signature for Neutron Skin*,

Int. workshop XXXII on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, January 11-17, 2004; URL: <http://theorie.ikp.physik.tu-darmstadt.de/nhc/pages/events/events.html>

59) A Talk: *PDR as a tool for the study of the neutron rich nuclei*,

1<sup>st</sup> Int. Conf. on 'Collective Motion in Nuclei under Extreme Conditions' (COMEX 1), 10 - 13 Jun 2003, Paris, France; URL: <http://ipnweb.in2p3.fr/comex1/>

60) A Talk: *Nuclear structure of electric dipole states in spherical nuclei*,

DPG Frühjahrstagung, Fachverband Hadronen und Kerne, 17.-21. März 2003, Eberhard-Karls-Universität Tübingen, Germany;

URL: <http://www.dpg-verhandlungen.de/year/2003/conference/tuebingen/part/hk/session/40>

61) Invited seminar: *Nuclear structure investigations of low-lying states in spherical nuclei*,

Dec. 19, 2002, Institut für Strahlenphysik der Universität Stuttgart, Germany.

62) A Talk: *Excitations of isomers in photonuclear reactions*,

XIV Int. School on Nucl. Phys., Neutron Phys. and Nucl. Energy, September 26 - 30, 2001, Varna, Bulgaria; URL: <http://www.phys.uni-sofia.bg/~ap/nsg/activities/conferences/>

63) A Talk: *Electric Dipole Transitions Between Low-Lying States in Even-Even  $N=84$  Isotones*,

June 16-21, 1998, XVII. Int. Workshop on Nuclear Theory, Giuletschica, Rila Mountains, Bulgaria.



