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## LIST OF PUBLICATIONS

(February 18, 2023)

### 1 Books, volumes

1. “Zbiór Zadań z Fizyki”, M. Marczewski and W. Nazarewicz, *Wydawnictwa Politechniki Warszawskiej, 1980* (in Polish).
2. “Nuclear Structure Models”, R. Bengtsson, J. Draayer, and W. Nazarewicz, *World Scientific, Singapore, 1993*, ISBN 981-02-1131-7
3. “The Nuclear Many-Body Problem 2001”, W. Nazarewicz and D. Vretenar, *Kluwer Academic Publishers, NATO Science Series II, Vol. 53. ISBN 1-4020-0462-1, 978-1-4020-0463-6*.
4. “The 4th International Conference on Exotic Nuclei and Atomic Masses, ENAM 2004”, C.J. Gross, W. Nazarewicz, and K.P. Rykaczewski, *SIF and Springer-Verlag, Berlin Heidelberg 2005*, ISBN-10 3-540-28441-9, ISBN-13 978-5-540-28441-3.
5. “Topical Issue on the Fifth International Conference on Exotic Nuclei and Atomic Masses ENAM’08,” edited by J. Äystö, W. Nazarewicz, M. Pfützner, and C. Signorini, *Eur. Phys. J. A 42, No. 3, 2009*.
6. “Focus Issue on Enhancing the interaction between nuclear experiment and theory through information and statistics”, edited by D.G. Ireland and W. Nazarewicz, *J. Phys. G 42, 030301 (2015)*.
7. “Special Issue on Superheavy Elements”. edited by Ch. E. Düllmann, R.-D. Herzberg, W. Nazarewicz, and Y. Oganessian, *Nucl. Phys. A 944, 1 (2015)*.

## 2 Reviews/Book Chapters

1. “Nuclear Shapes in Mean Field Theory”, S. Åberg, H. Flocard and W. Nazarewicz, *Annu. Rev. Nucl. Part. Sci.* **40**, 439 (1990).
2. “Coexistence in Even-Mass Nuclei”, J.L. Wood, K. Heyde, W. Nazarewicz, M. Huyse and P. van Duppen, *Phys. Rep.* **215**, 101 (1992).
3. “Identical Bands in Deformed and Superdeformed Nuclei”, C. Baktash, B. Haas, and W. Nazarewicz, *Annu. Rev. Nucl. Part. Sci.* **45**, 485 (1995).
4. “Intrinsic Reflection Asymmetry in Atomic Nuclei”, P. Butler and W. Nazarewicz, *Rev. Mod. Phys.* **68**, 349 (1996).
5. “Nuclear Deformations”, W. Nazarewicz and I. Ragnarsson, in *Handbook of Nuclear Properties*, ed. by D.N. Poenaru and W. Greiner, (Clarendon Press, Oxford), 1996, p. 80.
6. “The Nuclear Collective Motion”, W. Nazarewicz, *An Advanced Course in Modern Nuclear Physics*, ed. by J.M. Arias and M. Lozano, (*Lecture Notes in Physics*, Springer Berlin, 2001), p. 102.
7. “Calculation of Nuclear Quadrupole Coupling Constants”, Peter Schwerdtfeger, Markus Pernpointner, and Witold Nazarewicz, in *Quantum Chemical Calculation of Magnetic Resonance Properties*, ed. by M. Kaupp, M. Buehl, and V.G. Malkin (Wiley-VCH, 2003), *Chapter 17*, p. 279.
8. “Shell model in the complex energy plane (topical review)”, N. Michel, W. Nazarewicz, M. Płoszajczak, and T. Vertse, *J. Phys. G* **36**, 013101 (2009).
9. “Hartree-Fock-Bogoliubov solution of the pairing Hamiltonian in finite nuclei”, J. Dobaczewski and W. Nazarewicz; in *50 Years of Nuclear BCS*, ed. by R. A. Broglia and V. Zelevinski (World Scientific, 2013); pp. 40-60.
10. “Clustering and pasta phases in nuclear density functional theory,” B. Schuetrumpf, C.L. Zhang, and W. Nazarewicz, *Nuclear Particle Correlations and Cluster Physics*, Chapter 5, p. 135 (2017).

11. “Colloquium: Superheavy elements: Oganesson and beyond,” S. A. Giuliani, Z. Matheson, W. Nazarewicz, E. Olsen, P.-G. Reinhard, J. Sadhukhan, B. Schuetrumpf, N. Schunck, and P. Schwerdtfeger, *Rev. Mod. Phys.* **91**, 011001 (2019).
12. “r-Process Nucleosynthesis: Connecting Rare-Isotope Beam Facilities with the Cosmos (topical review)”, C. J. Horowitz, A. Arcones, B. Côté, I. Dillmann, W. Nazarewicz, I. Roederer, H. Schatz, A. Aprahamian, D. Atanasov, A. Bauswein, J. Bliss, M. Brodeur, J. A. Clark, A. Frebel, F. Foucart, C. J. Hansen, O. Just, A. Kankainen, G. C. McLaughlin, J. M. Kelly, S. N. Liddick, D. M. Lee, J. Lippuner, D. Martin, J. Mendoza-Temis, B. D. Metzger, M. R. Mumpower, G. Perdikakis, J. Pereira, B. W. O’Shea, R. Reifarth, A. M. Rogers, D. M. Siegel, A. Spyrou, R. Surman, X. Tang, T. Uesaka, and M. Wang, *J. Phys. G* **46**, 083001 (2019).
13. “Future of Nuclear Fission Theory (topical review)”, M. Bender, R. Bernard, G. Bertsch, S. Chiba, J. Dobaczewski, N. Dubray, S. A. Giuliani, K. Hagino, D. Lacroix, Z. Li, P. Magierski, J. Maruhn, W. Nazarewicz, J. Pei, S. Péru, N. Pillet, J. Randrup, D. Regnier, P.-G. Reinhard, L. M. Robledo, W. Ryssens, J. Sadhukhan, G. Scamps, N. Schunck, C. Simenel, J. Skalski, I. Stetcu, P. Stevenson, S. Umar, M. Verrière, D. Vretenar, M. Warda, and S. Åberg, *J. Phys. G* **47**, 113002 (2020).
14. “From bound states to the continuum (topical review)”, C. W. Johnson, K. D. Launey, N. Auerbach, S. Bacca, B. R. Barrett, C. Brune, M. A. Caprio, P. Descouvemont, W. H. Dickhoff, C. Elster, P. J. Fasano, K. Fossez, H. Her-gert, M. Hjorth-Jensen, L. Hlophe, B. Hu, R. M. Id Betan, A. Idini, S. König, K. Kravvaris, D. Lee, J. Lei, P. Maris, A. Mercenne, K. Minomo, R. Navarro Perez, W. Nazarewicz, F. M. Nunes, M. Ploszajczak, S. Quaglioni, J. Rotureau, G. Rupak, A. M. Shirokov, I. Thompson, J. P. Vary, A. Volya, F. Xu, V. Zelevinsky, X. Zhang, *J. Phys. G* **47**, 123001 (2020).
15. “Colloquium: Machine Learning in Nuclear Physics,” A. Boehnlein, M. Diefenthaler, C. Fanelli, M. Hjorth-Jensen, T. Horn, M. P. Kuchera, D. Lee, W. Nazarewicz, K. Orginos, P. Ostroumov, L.-G. Pang, A. Poon, N. Sato, M. Schram, A. Scheinker, M. S. Smith, X.-N. Wang, V. Ziegler, *Rev. Mod. Phys.* **94**, 031003 (2022).

16. “Opportunities for Fundamental Physics Research with Radioactive Molecules”, G. Arrowsmith-Kron, M. Athanasakis-Kaklamankis, Mia Au, J. Ballof, R. Berger, A. Borschovsky, A. A. Breier, F. Buchinger, D. Budker, L. Caldwell, C. Charles, N. Dattani, R. P. de Groote, D. DeMille, T. Dickel, J. Dobaczewski, C. E. Düllmann, E. Eliav, J. Engel, M. Fan, V. Flambaum, K. T. Flanagan, A. Gaiser, R. Garcia Ruiz, K. Gaul, T. F. Giesen, J. Ginges, A. Gottberg, G. Gwinner, R. Heinke, S. Hoekstra, J. D. Holt, N. R. Hutzler, A. Jayich, J. Karthein, K. G. Leach, K. Madison, S. Malbrunot-Ettenauer, T. Miyagi, I. D. Moore, S. Moroch, P. Navrátil, W. Nazarewicz, G. Neyens, E. Norrgard, N. Nusgart, L. F. Paštka, A. N. Petrov, W. Plass, R. A. Ready, M. Pascal Reiter, M. Reponen, S. Rothe, M. Safronova, C. Scheidenberger, A. Shindler, J. T. Singh, L. V. Skripnikov, A. V. Titov, S.-M. Udrescu, S. G. Wilkins, X. Yang, *J. Phys. G*, submitted 2023.

### 3 Journal Publications

1. “A Numerical Calculation of Multidimensional Integrals”, K. Zakrzewska, J. Dudek, and W. Nazarewicz, *Comput. Phys. Commun.* **14**, 299 (1978).
2. “Surface Disorder: a Possible Source of Magnetism in Alloys”, A. Zagórski, W. Nazarewicz, A.R. Ferchmin, and A. Sukiennicki, *Phys. Lett. A* **71**, 127 (1979).
3. “Parameters of the Deformed Woods-Saxon Potential Outside A=110-210 Nuclei”, J. Dudek, A. Majhofer, J. Skalski, T. Werner, S. Ćwiok, and W. Nazarewicz, *J. Phys. G* **5**, 1359 (1979).
4. “Microscopic Analysis of the Double Backbending in the Nucleus  $^{160}\text{Yb}$ ”, S. Ćwiok, W. Nazarewicz, J. Dudek, J. Skalski, and Z. Szymański, *Nucl. Phys. A* **333**, 139 (1980).
5. “Analysis of the Backbending Effect in  $^{166}\text{Yb}$ ,  $^{168}\text{Yb}$ ,  $^{170}\text{Yb}$  Within Hartree-Fock-Bogolyubov Cranking Method”, S. Ćwiok, W. Nazarewicz, J. Dudek, and Z. Szymański, *Phys. Rev. C* **21**, 448 (1980).
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7. "Thickness Dependence of the CPA Densities of States for Electrons in the Thin Film Alloys", A. Zagórski and W. Nazarewicz, *Acta Phys. Pol. A* **57**, 403 (1980).
8. "The dependence of Coulomb Displacement Energy on Deformation of a Nucleus", S. Ćwiok, W. Nazarewicz, and W. Zych, *Acta Phys. Pol. B* **11**, 445 (1980).
9. "Discussion of the Improved Parametrisation of the Woods-Saxon Potential for Deformed Nuclei", J. Dudek, W. Nazarewicz and T. Werner, *Nucl. Phys. A* **341**, 253 (1980).
10. "Peculiar Properties of Surface Magnetism in Thin Film Alloys", A. Zagórski, W. Nazarewicz, A.R. Ferchmin, and A. Sukiennicki, *Phys. Stat. Sol. (b)* **100**, 473 (1980).
11. "Calculation of the Nuclear Equilibrium Deformations and Moments Using a Consistency Condition for the Macroscopic and Microscopic Parts of the Strutinsky Energy Formula", J. Dudek, W. Nazarewicz, and P. Rozmej, *J. Phys. G* **6**, 1521 (1980).
12. "Some Remarks on the Nuclear Potential Energy Calculations", J. Dudek, W. Nazarewicz and P. Rozmej, *Nukleonika* **25**, 1049 (1980).
13. "Second Backbending in the Yrast Line of  $^{156}\text{Er}$ ", T. Byrski, F.A. Beck, C. Gehringer, J.C. Merdinger, Y. Schutz, J.P. Vivien, J. Dudek, W. Nazarewicz, and Z. Szymański, *Phys. Lett. B* **102**, 235 (1981).
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15. "On the Hexadecapole Anomaly at the Border of the Rare Earth Region", W. Nazarewicz, and P. Rozmej, *Nucl. Phys. A* **369**, 395 (1981).
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17. "Dilution in Amorphous or Frustrated Ising Systems", A.R. Ferchmin, S. Kobe, W. Nazarewicz, and A. Zagórski, *Wiss. Z. Hochsch. Verkehrswes. 'Friedrich List'*, Dresden, n°. **3**, suppl. (1981), p. 61

18. “The Neel and the Compensation Temperatures for a Disordered Ising Ferromagnet”, A. Zagórski, and W. Nazarewicz, *Acta Phys. Pol. A* **60**, 697 (1981).
19. “Anisotropy of X-ray Critical Scattering in Liquid NPOB Crystal”, B. Pura, J. Przedmojski, and W. Nazarewicz, *Solid State Comm.* **41**, 111 (1982).
20. “Possible Superdeformed States in Rare Earth Nuclei Studied Using the Nilsson and Woods-Saxon Potentials”, J. Dudek, A. Majhofer, W. Nazarewicz, and Z. Szymański, *Phys. Lett. B* **112**, 1 (1982).
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24. “Some Remarks on Surface Magnetism in Thin Alloyed Films”, A. Zagórski, W. Nazarewicz, and A.R. Ferchmin, *Phys. Lett. A* **91**, 307 (1982).
25. “Delayed Second Band Crossing in  $^{170}\text{W}$ ”, J. Recht, Y.K. Agarval, M. Guttormsen, H. Hübel, D.J. Decman, H. Kluge, K.H. Maier, N. Roy, J. Dudek, and W. Nazarewicz, *Phys. Lett. B* **122**, 207 (1983).
26. “High-Spin Rotational Bands and Pairing Reduction in  $^{166}\text{Hf}$ ”, Y.K. Agarwal, J. Recht, H. Hübel, M. Guttormsen, D.J. Decman, H. Kluge, K.H. Maier, J. Dudek, and W. Nazarewicz, *Nucl. Phys. A* **399**, 199 (1983).
27. “Kinematical and Dynamical Moments of Inertia and the Mottelson-Valatin Effect at High Spin Excitations”, J. Dudek, W. Nazarewicz, and Z. Szymański, *Phys. Scripta* **T5**, 171 (1983).
28. “Fission Barriers of Transfermium Elements”, S. Ćwiok, V.V. Pashkevich, J. Dudek and W. Nazarewicz, *Nucl. Phys. A* **410**, 254 (1983).

29. “Multidimensional Automatic Integrator (MDAI) - an Efficient Routine for Automatic Integration of Functions of Many Variables, W. Nazarewicz and M. Pindor, *Comput. Phys. Commun.* **31**, 1 (1984).
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33. “Analysis of the Octupole Instability in Medium Mass and Heavy Nuclei”, W. Nazarewicz, P. Olanders, I. Ragnarsson, J. Dudek, G.A. Leander, P. Möller, and E. Ruchowska, *Nucl. Phys. A* **429**, 269 (1984).
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47. “Rotational Properties of Octupole Deformed Nuclei Discussed within a Simple Model”, W. Nazarewicz and P. Olanders, *Phys. Rev. C* **32**, 602 (1985).
48. “Mössbauer Effects Study of the  $\text{Fe}_{80-x}\text{TM}_x\text{B}_{20}$  Amorphous Systems”, M. Łukasiak, H. Matyja, W. Nazarewicz, J. Pluta, I. Śledzińska and W. Zych, *Acta Phys. Pol. A* **68**, 199 (1985).

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