Publications

Morten Hjorth-Jensen 1,2

¹Department of Physics, University of Oslo, Norway ²Department of Physics and Astronomy and National Superconducting Cyclotron Laboratory, Michigan State University, USA

2016

Publications, books and refereed scientific articles Books:

- 1. Morten Hjorth-Jensen, Computational Physics, an introduction, to be published by IOP in 2016.
- 2. Morten Hjorth-Jensen, Computational Physics, an advanced course, to be published by IOP in 2016.
- 3. Morten Hjorth-Jensen, Nuclear many-body physics, a computational perspective, in preparation for Taylor Francis.
- 4. M. Hjorth-Jensen, Maria Paola Lambardo, and Ubirajara Van Kolck (editors), Computational Nuclear Physics-Bridging the scales, from quarks to neutron stars, to be published in Lectures Notes in Physics by Springer in 2016.

Publications in journals with a referee system: oErich W. Ormand, Alex B. Brown and Morten Hjorth-Jensen, First principles calculations for coefficients of the isobaric mass multiplet equation in the fp shell, in preparation for Physical Review C, 2016.

- 1. Justin Lietz, Sam Novario, Gustav, Jansen, Gaute Hagen, and Morten Hjorth-Jensen, *High-performance computing and infinite nuclear matter*, *Lecture Notes in Physics*, in press, 2016.
- 2. Fei Yuan, Jørgen Høgberget, Titus Morris, Sam Novario, Nathan Parzuchowski, Sarah Reimann, Scott K. Bogner and Morten Hjorth-Jensen, First principle calculations of quantum dot systems, in preparation for Journal of Chemical Physics, 2016.

- 3. G. Hagen, M. Hjorth-Jensen, G. R. Jansen, T. Papenbrock, *Emergent properties of nuclei from ab initio coupled-cluster calculations*, *Physica Scripta*, in press (2016).
- 4. Naofumi Tsunoda, Takaharu Otsuka, Noritaka Shimizu, Morten Hjorth-Jensen, Kazuo Takayanagi, Toshio Suzuki, Exotic neutron-rich mediummass nuclei with realistic nuclear forces, Physical Review C, in press
- G. Hagen, A. Ekstrom, C. Forssen, G. R. Jansen, W. Nazarewicz, T. Papenbrock, K. A. Wendt, S. Bacca, N. Barnea, B. Carlsson, C. Drischler, K. Hebeler, M. Hjorth-Jensen, M. Miorelli, G. Orlandini, A. Schwenk, and J. Simonis, Charge, neutron, and weak size of the atomic nucleus, Nature Physics, 12:186–190 (2016).
- A. Ekstrom, G. R. Jansen, K. A. Wendt, G. Hagen, T. Papenbrock, B. D. Carlsson, C. Forssen, M. Hjorth-Jensen, P. Navratil, W. Nazarewicz, Accurate nuclear radii and binding energies from a chiral interaction, Physical Review C, 91, 051301(R) (2015).
- A. Ekstrom, B. D. Carlsson, K. A. Wendt, C. Forssén, M. Hjorth-Jensen, R. Machleidt, S. M. Wild, Statistical uncertainties of a chiral interaction at next-to-next-to leading order, Journal of Physics G, 42:034003 (2015).
- 8. A. B. Balantekin, J. Carlson, D. J. Dean, G. M. Fuller, R. J. Furnstahl, M. Hjorth-Jensen, R. V. F. Janssens, Bao-An Li, W. Nazarewicz, F. M. Nunes, W. E. Ormand, S. Reddy, B. M. Sherrill, Nuclear Theory and Science of the Facility for Rare Isotope Beams, Modern Physics Letters A, 29:1430010 (2014).
- 9. Zs. Vajta, M. Stanoiu, D. Sohler, G. R. Jansen, F. Azaiez, Zs. Dombrádi, O. Sorlin, B. A. Brown, M. Belleguic, C. Borcea, C. Bourgeois, Z. Dlouhy, Z. Elekes, Zs. Fülöp, S. Grévy, D. Guillemaud-Mueller, G. Hagen, M. Hjorth-Jensen, F. Ibrahim, A. Kerek, A. Krasznahorkay, M. Lewitowicz, S. M. Lukyanov, S. Mandal, P. Mayet, J. Mrázek, F. Negoita, Yu.-E. Penionzhkevich, Zs. Podolyák, P. Roussel-Chomaz, M. G. Saint-Laurent, H. Savajols, G. Sletten, J. Timár, C. Timis, and A. Yamamoto, *Excited states in the neutron-rich nucleus 25F, Physical Review C, 89:054323 (2014).
- A. Sanetullaev, M.B. Tsang, W.G. Lynch, Jenny Lee, D. Bazin, K.P. Chan, D. Coupland, V. Henzl, D. Henzlova, M. Kilburn, A.M. Rogers, Z.Y. Sun, M. Youngs, R.J. Charity, L.G. Sobotka, M. Famiano, S. Hudan, D. Shapira, W.A. Peters, C. Barbieri, M. Hjorth-Jensen, M. Horoi, T. Otsuka, T. Suzuki, Y. Utsuno Neutron spectroscopic factors of 55Ni hole-states from (p,d) transfer reactions, Physics Letters B, 736:137 (2014).
- G. Hagen, T. Papenbrock, A. Ekstrom, G. Baardsen, S. Gandolfi, K. A. Wendt, M. Hjorth-Jensen, and C. Horowitz, Coupled-cluster calculations of nucleonic matter, Physical Review C, 89:014319 (2014).

- 12. T. Papenbrock, G. Hagen, M. Hjorth-Jensen, and D. J. Dean, *Coupled-cluster computations of atomic nuclei*, *Reports on Progress in Physics*, 77:096302 (2014).
- 13. N. Tsunoda, K. Takayanagi, M. Hjorth-Jensen and T. Otsuka, *Multi-shell effective interactions, Physical Review C*, 89:024313 (2014).
- 14. G. Baardsen, A. Ekstrom, G. Hagen, and M. Hjorth-Jensen, Coupled-cluster studies of infinite nuclear matter, Physical Review C, 88:054312 (2013).
- V. M. Bader, A. Gade, D. Weisshaar, T. Baugher, D. Bazin, J. S. Berryman, B. A. Brown, A. Ekstrom, M. Hjorth-Jensen, S. R. Stroberg, W. B. Walters, K. Wimmer, and R. Winkler, Quadrupole collectivity in neutron-deficient Sn nuclei: 104Sn and the role of proton excitations, Physical Review C, 88:051301(R) (2013).
- A. Ekstrom, G. Baardsen, C. Forss'en, G. Hagen, M. Hjorth-Jensen, G. R. Jansen, R. Machleidt, W. Nazarewicz, T. Papenbrock, J. Sarich, and S. M. Wild, An optimal chiral interaction at next-to-next-to leading order, Physical Review Letters, 110:192502 (2013).
- 17. Lepailleur, A. and Sorlin, O. and Caceres, L. and Bastin, B. and Borcea, C. and Borcea, R. and Brown, B. A. and Gaudefroy, L. and Gr'evy, S. and Grinyer, G. F. and Hagen, G. and Hjorth-Jensen, M. and Jansen, G. R. and Llidoo, O. and Negoita, F. and de Oliveira, F. and Porquet, M.-G. and Rotaru, F. and Saint-Laurent, M.-G. and Sohler, D. and Stanoiu, M. and Thomas, J. C., Spectroscopy of 26F to Probe Proton-Neutron Forces Close to the Drip Line, Physical Review Letters, 110:082502 (2013).
- 18. D. D. DiJulio, J. Cederkall, C. Fahlander, A. Ekstrom, M. Hjorth-Jensen, M. Albers, V. Bildstein, A. Blazhev, I. Darby, T. Davinson, H. De Witte, J. Diriken, Ch. Fransen, K. Geibel, R. Gernhäuser, A. Görgen, H. Hess, K. Heyde, J. Iwanicki, R. Lutter, P. Reiter, M. Scheck, M. Seidlitz, S. Siem, J. Taprogge, G. M. Tveten, J. Van de Walle, D. Voulot, N. Warr, F. Wenander, and K. Wimmer Coulomb excitation of 107In, Physical Review C, 87:017301 (2013).
- 19. C. Forssen, G. Hagen, M. Hjorth-Jensen, W. Nazarewicz, and J. Rotureau, Living on the edge of stability, the limits of the nuclear landscape, Physica Scripta, T152:014022 (2013).
- 20. Liddick, S. N. and Abromeit, B. and Ayres, A. and Bey, A. and Bingham, C. R. and Brown, B. A. and Cartegni, L. and Crawford, H. L. and Darby, I. G. and Grzywacz, R. and Ilyushkin, S. and Hjorth-Jensen, M. and Larson, N. and Madurga, M. and Miller, D. and Padgett, S. and Paulauskas, S. V. and Rajabali, M. M. and Rykaczewski, K. and Suchyta, S., * Low-energy level schemes of 66,68Fe and inferred proton and neutron excitations across Z = 28 and N = 40*, Physical Review C, 87:014325, 2013.

- 21. D. D. DiJulio, J. Cederkall, C. Fahlander, A. Ekstrom, M. Hjorth-Jensen, M. Albers, V. Bildstein, A. Blazhev, I. Darby, T. Davinson, H. De Witte, J. Diriken, Ch. Fransen, K. Geibel, R. Gernhauser, A. Gorgen, H. Hess, J. Iwanicki, R. Lutter, P. Reiter, M. Scheck, M. Seidlitz, S. Siem, J. Taprogge, G.M. Tveten, J. Van de Walle, D. Voulot, N. Warr, F. Wenander, and K. Wimmer, Excitation strengths in 109Sn: Single-neutron and collective excitations near 100Sn, Physical Review C, 86:031302(R), 2012.
- 22. D. D. DiJulio, J. Cederkall, C. Fahlander, A. Ekstrom, M. Hjorth-Jensen, M. Albers, V. Bildstein, A. Blazhev, I. Darby, T. Davinson, H. De Witte, J. Diriken, Ch. Fransen, K. Geibel, R. Gernhauser, A. Gorgen, H. Hess, J. Iwanicki, R. Lutter, P. Reiter, M. Scheck, M. Seidlitz, S. Siem, J. Taprogge, G.M. Tveten, J. Van de Walle, D. Voulot, N. Warr, F. Wenander, and K. Wimmer, Coulomb excitation of 107Sn, European Journal of Physics A, 48:105, 2012.
- Gaute Hagen, Morten Hjorth-Jensen, Gustav Ragnar Jansen, Ruprecht Machleidt, and Thomas Papenbrock, Evolution of shell structure in neutronrich calcium isotopes, Physical Review Letters, 109:032502, 2012.
- 24. Gaute Hagen, Morten Hjorth-Jensen, Gustav Ragnar Jansen, Ruprecht Machleidt, and Thomas Papenbrock, Continuum effects and three-nucleon forces in neutron-rich oxygen isotopes, Physical Review Letters, 108:242501, 2012.
- 25. Torres, D. A. and Kumbartzki, G. J. and Sharon, Y. Y. and Zamick, L. and Manning, B. and Benczer-Koller, N. and Speidel, K.-H. and Ahn, T. and Anagnostatou, V. and Elvers, M. and Goddard, P. and Heinz, A. and Ilie, G. and Radeck, D. and Savran, D. and Werner, V. and Gurdal, G. and Taylor, M. J. and Maier-Komor, P. and Hjorth-Jensen, M. and Robinson, S. J. Q. Measurement of the 96Ru g-factor and its nuclear structure interpretation. Physical Review C, 85:017305, 2012.
- 26. Torres, D. A. and Kumbartzki, G. J. and Sharon, Y. Y. and Zamick, L. and Manning, B. and Benczer-Koller, N. and Gurdal, G. and Speidel, K.-H. and Hjorth-Jensen, M. and Maier-Komor, P. and Robinson, S. J. Q. and Ahn, T. and Anagnostatou, V. and Elvers, M. and Goddard, P. and Heinz, A. and Ilie, G. and Radeck, D. and Savran, D. and Werner, V. First g-factor measurements of the 2+ and the 4+ states of radioactive 100Pd. Physical Review C, 84:044327, 2011.
- 27. Naofumi Tsunoda, Takaharu Otsuka, Koshiroh Tsukiyama, and Morten Hjorth-Jensen Renormalization persistency of the tensor force in nuclei. Physical Review C, 84:044322, 2011.
- 28. O. Jensen, Gaute Hagen, Morten Hjorth-Jensen, Alex Boyd Brown, and Alexandra Gade Quenching of spectroscopic factors for proton removal in oxygen isotopes, Physical Review Letters, 107:032501, 2011.

- 29. Magnus Pedersen Lohne, Gaute Hagen, Morten Hjorth-Jensen, Simen Kvaal, and Francesco Pederiva, *Ab initio calculations of Circular quantum dots. Physical Review B*, 84:032501, 2011.
- 30. Elise Bergli and Morten Hjorth-Jensen, *Summation of Parquet diagrams as an *ab initio* method in nuclear structure calculations*, *Annals of Physics*, 326:1125, 2011.
- 31. Gustav Ragnar Jansen, Morten Hjorth-Jensen, Gaute Hagen, and Thomas Papenbrock, *Toward open-shell nuclei with coupled-cluster theory*. *Physical Review C*, 83:054306, 2011.
- 32. Morten Hjorth-Jensen, The Carbon Challenge, Physics, 4:38, 2011.
- 33. O. Jensen, G. Hagen, M. Hjorth-Jensen, and J. S. Vaagen, Closed-shell properties of 240 with ab initio coupled-cluster theory, Physical Review C, 83:021305, 2011.
- 34. Angelo Signoracci, B. Alex Brown, and Morten Hjorth-Jensen, Renormalized interactions with a realistic single-particle basis, Physical Review C, 83:024315, 2011.
- 35. Boyd Alexander Brown, Angelo Signoracci, and Morten Hjorth-Jensen, Configuration interactions constrained by energy density functionals, Physics Letters B, 695:507, 2011.
- 36. G. Hagen, T. Papenbrock, D. J. Dean, and M. Hjorth-Jensen, *Ab initio coupled-cluster approach to nuclear structure with modern nucleon-nucleon interactions, *Phys. Rev. C*, 82(3):034330, 2010.
- 37. L. Atanasova, Dimiter Balabanski, S. K. Chamoli, M. Hass, G. S. Simpson, D. Bazzacco, F. Becker, P. Bednarczyk, G. Benzoni, N. Blasi, A. Blazhev, A. Bracco, C. Brandau, L. Caceres, F. Camera, F. C. L. Crespi, P. Detistov, P. Doornenbal, C. Fahlander, E. Farnea, G. Georgiev, J. Gerl, K. A. Gladnishki, M. Gorska, J. Grebosz, R. Hoischen, G. Ilie, M. Ionescu-Bujor, A. Iordachescu, A. Jungclaus, G. Bianco, M. Kmiecik, I. Kojouharov, N. Kurz, S. Lakshmi, R. Lozeva, A. Maj, D. Montanari, G. Neyens, M. Pfuetzner, S. Pietri, Z. Podolyak, W. Prokopowicz, D. Rudolph, G. Rusev, T. Saito, A. Saltarelli, H. Schaffner, R. Schwengner, S. Tashenov, J. J. Valiente-Dobon, N. Vermeulen, J. Walker, E. Werner-Malento, O. Wieland, H. J. Wollersheim, H. Grawe, and Morten Hjorth-Jensen. g-factor measurements at RISING: The cases of 127Sn and 128Sn. Europhysics letters, 91:42001, 2010.
- 38. I. Darby, R. Grzywacz, J. C. Batchelder, C. R. Bingham, L. Cartegni, C. J. Gross, Morten Hjorth-Jensen, D. T. Joss, S. N. Liddick, W. Nazarewicz, S. Padgett, R. D. Page, Thomas Papenbrock, M. M. Rajabali, J. Rotureau, and K. P. Rykaczewski, *Orbital Dependent Nucleonic Pairing in the Lightest Known Isotopes of Tin. Physical Review Letters*, 105:162502, 2010.

- 39. A. Ekstrom, Joakim Cederkall, Claes Fahlander, Morten Hjorth-Jensen, Torgeir Engeland, Peter Butler, P. A. Butler, T. Davinson, J. Eberth, F. Finke, Andreas Gorgen, M. Gorska, A. M. Hurst, O. Ivanov, J. Iwanicki, U. Koster, B. A. Marsh, J. Mierzejewski, P. Reiter, Sunniva Siem, G. Sletten, I. Stefanescu, Gry Merete Tveten, J. Van de Walle, D. Voulot, N. Warr, D. Weisshaar, F. Wenander, and M. Zielinska, Coulomb excitation of the odd-odd isotopes 106In and 108In, European Physical Journal A, 44:355, 2010.
- 40. Gaute Hagen, Thomas Papenbrock, and Morten Hjorth-Jensen, *Ab Initio Computation of the 17F Proton Halo State and Resonances in A=17 Nuclei, Physical Review Letters*, 104:182501, 2010.
- 41. Morten Hjorth-Jensen, David Jarvis Dean, G. Hagen, and Simen Kvaal, Many-body interactions and nuclear structure, Journal of Physics G: Nuclear and Particle Physics, 37:064035, 2010.
- 42. N. Hoteling, C. Chiara, R. Broda, W. B. Walters, R. V. F. Janssens, Morten Hjorth-Jensen, M. B. Carpenter, B. Fornal, A. A. Hecht, W. Krolas, T. Lauritsen, T. Pawlat, D. Seweryniak, X. Wang, A. Wohr, J. Wrzesinski, and S. Zhu. Structure of 60,62Fe and the onset of nug(9/2) occupancy, Physical Review C, 82:044305, 2010.
- 43. Takahuro Otsuka, Toshio Suzuki, Micho Honma, Yutaka Utsuno, Naofumi Tsunoda, Koshiroh Tsukiyama, and Morten Hjorth-Jensen, *Novel Features of Nuclear Forces and Shell Evolution in Exotic Nuclei, Physical Review Letters*, 104:012501, 2010.
- 44. C. Barbieri and Morten Hjorth-Jensen, Quasiparticle and quasihole states of nuclei around 56Ni, Physical Review C, 79:064313, 2009.
- 45. A. Ekstrom, J. Cederkall, D. D. DiJulio, C. Fahlander, Morten Hjorth-Jensen, A. Blazhev, B. Bruyneel, P. A. Butler, T. Davinson, J. Eberth, C. Fransen, K. Geibel, H. Hess, O. Ivanov, J. Iwanicki, O. Kester, J. Kownacki, U. Koster, B. A. Marsh, P. reiter, M. Scheck, B. Siebeck, Sunniva Siem, I. Stefanescu, Heidi Kristine Toft, Gry Merete Tveten, J. Van de Walle, D. Voulot, N. Warr, D. Weisshaar, F. Wenander, K. Wrzosek, and M. Zielinska, Electric quadrupole moments of the 2+ states in 100,102,104Cd, Physical Review C, 80:054302, 2009.
- G. Hagen, T. Papenbrock, D. J. Dean, Morten Hjorth-Jensen, and B. V. Asokan, Ab initio computation of neutron-rich oxygen isotopes, Physical Review C, 80:021306, 2009.
- 47. Micho Honma, Takahuro Otsuka, T. Mizusaki, and Morten Hjorth-Jensen, New effective interaction for fpg-shell nuclei. Physical Review C, 80:064323, 2009.

- 48. Koshiroh Tsukiyama, Morten Hjorth-Jensen, and Gaute Hagen, Gamow shell-model calculations of drip-line oxygen isotopes. Physical Review C, 80:051301(R), 2009.
- David J. Dean, Gaute Hagen, Morten Hjorth-Jensen, and Thomas Papenbrock, * Computational aspects of nuclear coupled-cluster theory*. *Computational Science and Discovery*, 1:015008, 2008.
- David J. Dean, Gaute Hagen, Morten Hjorth-Jensen, Thomas Papenbrock, and Achim Schwenk, Comment on Ab initio study of 40Ca with an importance-truncated no-core shell model. Physical Review Letters, 101:119201, 2008.
- 51. A. Ekstrom, J. Cederkall, C. Fahlander, Morten Hjorth-Jensen, F. Ames, P. A. Butler, T. Davinson, J. Eberth, F. Fincke, A. Gorgen, M. Gorska, D. Habs, A. M. Hurst, M. Huyse, O. Ivanov, J. Iwanicki, O. Kester, U. Koster, B. A. Marsh, J. Mierzejewski, P. Reiter, H. Scheit, D. Schwalm, Sunniva Siem, G. Sletten, I. Stefanescu, Gry Merete Tveten, J. V. de Walle, P. Van Duppen, D. Voulot, N. Warr, D. Weisshaar, F. Wenander, and M. Zielinska. Transition strengths in 106Sn and 108Sn, Physical Review Letters, 101:01250, 2008.
- 52. Gaute Hagen, Thomas Papenbrock, David J. Dean, and Morten Hjorth-Jensen, Medium-Mass Nuclei from Chiral Nucleon-Nucleon Interactions, Physical Review Letters, 101:092502, 2008.
- 53. N. Hoteling, W. B. Walters, R. V. F. Janssens, R. Broda, M. P. Carpenter, B. Fornal, A. A. Hecht, Morten Hjorth-Jensen, W. Krolas, T. Lauritsen, T. Pawlat, D. Seweryniak, J. R. Stone, X. Wang, A. Wohr, J. Wrzesinski, and S. Zhu, Rotation-aligned coupling in 61Fe, Physical Review C, 77:044314, 2008.
- 54. J. Cederkall, A. Ekstrom, C. Fahlander, A. M. Hurst, Morten Hjorth-Jensen, F. Ames, A. Banu, P. A. Butler, T. Davinson, U. D. Pramanik, J. Eberth, S. Franchoo, G. Georgiev, M. Gorska, D. Habs, M. Huyse, O. Ivanov, J. Iwanicki, O. Kester, U. Koster, B. A. Marsh, O. Niedermaier, T. Nilsson, P. Reiter, H. Scheit, D. Schwalm, T. Sieber, G. Sletten, I. Stefanescu, J. V. de Walle, P. Van Duppen, N. Warr, D. Weisshaar, and F. Wenander, Sub-barrier Coulomb excitation of 110Sn and its implications for the 100Sn shell closure, Physical Review Letters, 98:172501, 2007.
- 55. Gaute Hagen, David J. Dean, Morten Hjorth-Jensen, and Thomas Papenbrock, Complex coupled-cluster approach to an ab-initio description of open quantum systems, Physics Letters B, 656:169, 2007.
- 56. Gaute Hagen, David J. Dean, Morten Hjorth-Jensen, Thomas Papenbrock, and Achim Schwenk, *Benchmark calculations for 3H*, 4He, 16O, and 40Ca with ab initio coupled-cluster theory. Physical Review C, 76:044305, 2007.

- 57. Maxim Kartamychev, Torgeir Engeland, Morten Hjorth-Jensen, and Eivind Osnes, Effective interactions and shell model studies of heavy tin isotopes, Physical Review C, 76:024313, 2007.
- 58. Simen Kvaal, Morten Hjorth-Jensen, and Halvor Moll Nilsen, Effective interactions, large-scale diagonalization, and one-dimensional quantum dots, Physical Review B, 76:085421, 2007.
- 59. C. Vaman, C. Andreoiu, D. Bazin, A. Becerril, B. A. Brown, C. M. Campbell, A. Chester, J. M. Cook, D. C. Dinca, A. Gade, D. Galaviz, T. Glasmacher, Morten Hjorth-Jensen, M. Horoi, D. Miller, V. Moeller, W. F. Mueller, A. Schiller, K. Starosta, A. Stolz, J. R. Terry, A. Volya, V. Zelevinsky, and H. Zwahlen. Z=50 shell gap near 100Sn from intermediate-energy coulomb excitations in even-mass 106-112Sn isotopes, Physical Review Letters, 99:162501, 2007.
- Jeffrey Grour, Piotr Piecuch, Morten Hjorth-Jensen, Marta Wloch, and David Jarvis Dean, Coupled-cluster calculations for valence systems around 16O, Physical Review C, 74:024310, 2006.
- 61. Gaute Hagen, Morten Hjorth-Jensen, and Michel Nicolas, *Gamow shell model and realistic nucleon-nucleon interactions*, *Physical Review C*, 73:064307, 2006.
- 62. Nathan Hoteling, W. B. Walters, R. V. F. Janssens, R. Broda, M. F. Carpenter, B. Fornal, A. A. Hecht, Morten Hjorth-Jensen, W. Krolas, T. Lauritzen, T. Pawlat, D. Seweryniak, X. Wang, A. Wohr, J. Wrzesinski, and S. Zhu. Yrast structure of 64Fe. Physical Review C, 74:064313, 2006.
- 63. J. Leske, K. H. Speidel, S. Schielke, J. Gerber, P. Maier-Komor, Torgeir Engeland, and Morten Hjorth-Jensen, Experimental g-factor and B(E2) value of the 4+ state in Coulomb-excited 66Zn compared to shell-model predictions. Physical Review C, 73:064305, 2006.
- 64. A. Banu, J. Gerl, C. Fahlander, M. Gorska, H. Grawe, H. J. Wollersheim, E. Caurier, Torgeir Engeland, A. Gniady, Morten Hjorth-Jensen, F. Nowacki, T. Beck, F. Becker, P. Bednarczyk, M. A. Bentley, A. Burger, F. Cristancho, G. de Angelis, Z. Dombradi, P. Doornenbal, H. Geissel, J. Grebosz, G. Hammond, M. Hellstrom, J. Jolie, I. Kojouharov, N. Kurz, R. Lozeva, S. Mandal, N. Marginean, S. Muralithar, J. Nyberg, J. Pochodzalla, W. Prokopowicz, P. Reiter, D. Rudolph, C. Rusu, N. Saito, H. Schaffner, D. Sohler, H. Weick, C. Wheldon, and M. Winkler, 108Sn studied with intermediate-energy Coulomb excitation, Physical Review C, 72:061305, 2005.
- 65. Boyd Alexander Brown, Nick Stone, Irena Stone, Ian Towner, and Morten Hjorth-Jensen, Magnetic moments of the 2+ states around 132Sn, Physical Review C, 71:044317, 2005.

- 66. Paul Ellis, Torgeir Engeland, Morten Hjorth-Jensen, Maximx Kartamyshev, and Eivind Osnes, *Model calculation of effective three-body forces*, *Physical Review C*, 71:034301, 2005.
- 67. Gaute Hagen, Morten Hjorth-Jensen, and Jan S. Vaagen, Effective interaction techniques for the Gamow shell model, Physical Review C, 71:044314, 2005.
- J. K. Leske, Karl-heinz Speidel, S. Schielke, J. Gerber, P. Maier-komor, Morten Hjorth-Jensen, and Torgeir Engeland, *Physical Review C*, 72:044301, 2005.
- 69. Jon Kristian Nilsen, Jordi Mur-Petit, Muntsa Guilleumas, Morten Hjorth-Jensen, and Artur Polls, *Vortices in atomic Bose-Einstein condensates in the large-gas-parameter region*, *Physical Review A*, 71:053610, 2005.
- 70. D. Sohler, M. Palacz, Z. Dombradi, Morten Hjorth-Jensen, C. Fahlander, L. O. Norlin, J. Nyberg, T. Back, K. Lagergren, D. Rudolph, A. Algora, C. Andreoiu, G. de Angelis, A. Atac, D. Bazzacco, J. Cederkall, B. Cederwall, B. Fant, E. Farnea, A. Gadea, M. Gorska, H. Grawe, N. Hashimito-Saitoh, A. Johnson, A. Kerek, W. Klamra, J. Kownacki, S. M. Lenzi, A. Likar, M. Lipoglavsek, M. Moszynski, D. R. Napoli, C. Rossi-Alvarez, H. A. Roth, T. Saitoh, D. Seweryniak, O. Skeppstedt, J. Timar, M. Weisflog, and M. Wolinska, Maximally aligned states in the proton drip line nucleus 106Sb, Nuclear Physics A, 753:251, 2005.
- Marta Wloch, David J. Dean, Jeffrey Grour, Morten Hjorth-Jensen, Karol Kowalski, Thomas Papenbrock, and Piotr Piecuch, Ab-initio coupled-cluster study of 16O, Physical Review Letters, 94:212501, 2005.
- 72. David J. Dean, Torgeir Engeland, Morten Hjorth-Jensen, Maxim Kartamychev, and Eivind Osnes, Effective interactions and the nuclear shell-model, Progress in Particle and Nuclear Physics, 53:419, 2004.
- 73. Haavar Gausemel, Birger Fogelberg, Torgeir Engeland, Morten Hjorth-Jensen, Per Hoff, Hendryk Mach, K. A. Mezilev, and Jon Petter Omtvedt, *Decay of 127In and 129In, Physical Review C*, 69:054307, 2004.
- 74. Gaute Hagen, Jan S. Vaagen, and Morten Hjorth-Jensen, The contour deformation method in momentum space, applied to subatomic physics, Journal of Physics A: Mathematical and General, 37:8991, 2004.
- 75. Karol Kowalski, David J. Dean, Morten Hjorth-Jensen, Thomas Papenbrock, and Piotr Piecuch, *Coupled cluster calculations of ground and excited states of nuclei*, *Physical Review Letters*, 92:132501, 2004.
- 76. David J. Dean and Morten Hjorth-Jensen, *Pairing in nuclear systems:* from neutron stars to finite nuclei, Reviews of Modern Physics, 75:607, 2003.

- I. Dillmann, K. L. Kratz, A. Wohr, O. Arndt, B. A. Brown, Per Hoff, Morten Hjorth-Jensen, U. Koster, A. Ostrowski, B. Pfeiffer, D. Seweryniak, J. Shergur, and W. B. Walters, N=82 shell-quenching of the classical r-process waiting-point 130Cd. Physical Review Letters, 91:162503, 2003.
- 78. Magne Guttormsen, Rositsa Chankova, Morten Hjorth-Jensen, John Bernhard Rekstad, Sunniva Siem, Andreas Schiller, and David J. Dean, Free energy and criticality in the nucleon pair breaking process, Physical Review C, 68:034311, 2003.
- 79. A. Schiller, Emel Algin, Lee Bernstein, P. E. Garrett, Magne Guttormsen, Morten Hjorth-Jensen, C. W. Johnson, Gary Mitchell, John Bernhard Rekstad, Sunniva Siem, Alexander Voinov, and William Younes, Level densities in 56,57Fe and 96,97Mo, Physical Review C, 68:054326, 2003.
- 80. N. Fotiades, J. A. Cizewski, J. A. Becker, A. Bernstein, D. P. Mcnabb, William Younes, R. M. Clark, P. Fallon, I. Y. Lee, A. O. Macchiavelli, Anne Holt, and Morten Hjorth-Jensen, *High-spin excitations in 92,93,94,95Zr*, *Physical Review C*, 65:044303, 2002.
- 81. M. Lipoglavsek, C. Baktash, Jan Blomqvist, David J. Dean, Torgeir Engeland, C. Fahlander, Morten Hjorth-Jensen, Robert V. F. Janssens, A. Likar, Eivind Osnes, and S. D. Paul, *Break-up of the Doubly-magic 100Sn core*, *Physical Review C*, 66:011302, 2002.
- 82. M. Lipoglavsek, C. Baktash, M. P. Carpenter, David J. Dean, Torgeir Engeland, C. Fahlander, Morten Hjorth-Jensen, and Eivind Osnes, *Excited states of the proton emitter 105Sb, *Physical Review C*, 65:051037, 2002.
- 83. M. Lipoglavsek, C. Baktash, M. P. Carpenter, David J. Dean, Torgeir Engeland, Morten Hjorth-Jensen, and Eivind Osnes, *Core excitations in* 102In, *Physical Review C*, 65:021302(R), 2002.
- 84. J. J. Ressler, W. B. Walters, C. N. Davids, David J. Dean, Andreas Heinz, Morten Hjorth-Jensen, D. Seweryniak, and J. Shergur, First observation of 109Te β⁺ and electron capture decay of 109Sb, Physical Review C, 66:024308, 2002.
- 85. Andreas Schiller, Magne Guttormsen, Morten Hjorth-Jensen, John Bernhard Rekstad, and Sunniva Siem, *Model for pairing phase transition in atomic nuclei*, *Physical Review C*, page 024315, 2002.
- 86. J. Shergur, B. A. Brown, V. N. Fedosseev, U. K?ster, K. L. Kratz, D. Seweryniak, W. B. Walters, A. Wohr, D. Fedorov, M. Hannawald, Morten Hjorth-Jensen, V. Mishin, B. Pfeiffer, J. J. Ressler, H. O. U. Fynbo, and Per Hoff, Beta decay studies of 135-137Sn using selective reonace laser ionization techniques, Physical Review C, 65:034313, 2002.

- 87. Magne Guttormsen, Morten Hjorth-Jensen, Elin Melby, John Bernhard Rekstad, Andreas Schiller, and Sunniva Siem, *Heat capacity and pairing transition in nuclei*, *Physical Review C*, 64:034319, 2001.
- 88. Andreas Schiller, Amund Bjerve, Magne Guttormsen, Morten Hjorth-Jensen, Finn Ingebretsen, Elin Melby, John Bernhard Rekstad, Sunniva Siem, and Stein Westad Odegaard, *The critical temperature for quenching of pair correlations, Physical Review C*, 63:021306, 2001.
- 89. Teemu Siiskonen, Morten Hjorth-Jensen, and Jouni Suhonen, Renormalization of the weak hadronic current in the nuclear medium, Physical Review C, 63:024315, 2001.
- 90. Torgeir Engeland, Morten Hjorth-Jensen, and Eivind Osnes, Shell model studies of the proton drip line nucleus 106Sb, Physical Review C, 61:00010(R), 2000.
- 91. Magne Guttormsen, Amund Bjerve, Morten Hjorth-Jensen, Elin Melby, John Bernhard Rekstad, Andreas Schiller, Sunniva Siem, and Alexandar Belic, Entropy in hot 161,162Dy and 171,172Yb nuclei, Physical Review C, C62:024306, 2000.
- 92. Magne Guttormsen, Morten Hjorth-Jensen, Elin Melby, John Bernhard Rekstad, Andreas Schiller, and Sunniva Siem, Energy shifted level density in the rare earth region, Physical Review C, 61:067302, 2000.
- 93. Magne Guttormsen, Morten Hjorth-Jensen, Elin Melby, John Bernhard Rekstad, Andreas Schiller, and Sunniva Siem, *Entropy of thermally excited particles in nuclei*, *Physical Review C*, 63:024315, 2000.
- 94. Henning Heiselberg and Morten Hjorth-Jensen, *Phases of dense matter in neutron stars*, *Physics Reports*, 328:237, 2000.
- 95. Anne Holt, Torgeir Engeland, Morten Hjorth-Jensen, and Eivind Osnes, Applications of realistic effective interactions to the structure of Zr isotopes, Physical Review C, 61:024315, 2000.
- 96. M. Tomaselli, M. Hjorth-Jensen, S. Fritzsche, P. Egelhof, S. R. Neumaier, M. Mutterer, T. Kuhl, A. Dax, and H. Wang, *Matter and charge distributions of 6He and 5,6,7,9Li within the dynamic-correlation model, Physical Review C*, 62:067305, 2000.
- 97. Isaac Vidanya, Artur Polls, Angels Ramos, Lars Engvik, and Morten Hjorth-Jensen, *Properties of beta-stable neutron star matter with hyperons*, *Physical Review C*, 62:024315, 2000.
- 98. Isaac Vidanya, Artur Polls, Angels Ramos, Morten Hjorth-Jensen, and V. G. J. Stoks, *Strange nuclear matter within the Brueckner-Hartree-Fock theory*, *Physical Review C*, 61:024315, 2000.

- 99. David J. Dean, M. T. Ressell, Morten Hjorth-Jensen, S. E. Koonin, K. Langanke, and A. P. Zuker, *Shell model Monte Carlo studies of neutron-rich nuclei in the 1s0d-1p0f shells, Physical Review C*, 59:2474, 1999.
- 100. Henning Heiselberg and Morten Hjorth-Jensen, *Phase transitions in neutron stars and maximum masses*, *Astrophysical Journal Letters*, 525:L45, 1999.
- S. M. Vincent, P. H. Regan, S. Mohammadi, D. Blumenthal, M. Carpenter,
 C. N. Davids, W. Gelletly, S. S. Ghugre, D. J. Henderson, R. V. F. Janssens,
 M. Hjorth-Jensen, B. Kharraja, C. J. Lister, C. J. Pearson, D. Seweryniak,
 J. Schwartz, J. Simpson, and D. D. Warner, Near yrast study of the fpg
 shell nuclei 58Ni, 61Cu and 61Zn, Physical Review C, 60:064308, 1999.
- 102. Elin Melby, Lisbeth Bergholt, Magne Guttormsen, Morten Hjorth-Jensen, Finn Ingebretsen, Svein Messelt, John Bernhard Rekstad, Andreas Schiller, Sunniva Siem, and Stein Westad Odegaard, Observation of thermodynamical properties in the 162Dy, 166Er, 172Yb nuclei, Physical Review Letters, 83:3150, 1999.
- 103. Teemu Siiskonen, Jouni Suhonen, and Morten Hjorth-Jensen, Shell-model effective operators for muon capture in 20Ne, Journal of Physics G: Nuclear and Particle Physics, 25:L55, 1999.
- 104. Teemu Siiskonen, Jouni Suhonen, and Morten Hjorth-Jensen, Towards the solution of the C_P/C_A anomaly in shell-model calculations of muon capture, Physical Review C, 59:R1839, 1999.
- 105. Marcello Baldo, Oystein Elgaroy, Lars Engvik, Morten Hjorth-Jensen, and Hans-Josef Schulze, Modern nucleon-nucleon potentials and 3P_2 – 3F_2 pairing in neutron matter, Physical Review C, 58:1921, 1998.
- 106. Oystein Elgaroy, Lars Engvik, Morten Hjorth-Jensen, and Eivind Osnes, Minimal relativity and 3S_1 – 3D_1 pairing in symmetric nuclear matter, Physical Review C, 57:1069, 1998.
- 107. Oystein Elgaroy and Morten Hjorth-Jensen, Nucleon-nucleon phase shifts and pairing in infinite matter, Physical Review C, 57:1174, 1998.
- 108. R. Grzywacz, R. Beraud, C. Borcea, A. Ensallem, M. Glogowski, H. Grawe, D. Guillemaud-Mueller, Morten Hjorth-Jensen, M. Houry, M. Lewitowicz, A. C. Mueller, A. Nowak, and A. Plochocki, New island of mus-isomers in neutron-rich nuclei around the Z=28 and N=40 shell closures, Physical Review Letters, 81:766, 1998.
- 109. Henning Heiselberg and Morten Hjorth-Jensen, *Phase transitions in rotating neutron stars*, *Physical Review Letters*, 80:5485, 1998.

- 110. Anne Holt, Torgeir Engeland, Morten Hjorth-Jensen, and Eivind Osnes, Shell-model calculations of heavy Sn isotopes, Nuclear Physics A, 634:41, 1998.
- 111. Artur Polls, Herbert Muther, Ruprecht Machleidt, and Morten Hjorth-Jensen, *Phaseshift equivalent NN potentials and the deuteron, Physics Letters B*, 432:1, 1998.
- 112. Jouni Suhonen, Jussi Toivanen, Torgeir Engeland, Morten Hjorth-Jensen, Anne Holt, and Eivind Osnes, Study of odd-mass N=82 isotones: comparison of the microscopic quasiparticle-phonon model and the nuclear shell model, Nuclear Physics A, 628:41, 1998.
- 113. Isaac Vidanya, Artur Polls, Angels Ramos, and Morten Hjorth-Jensen, Hyperon properties in finite nuclei using realistic YN interactions, Nuclear Physics A, 644:201, 1998.
- 114. G. N. White, N. J. Stone, J. Rikovska, Y. Koh, J. Copell, T. J. Giles, I. S. Towner, B. A. Brown, S. Ohya, Birger Fogelberg, L. Jacobsson, P. Rahkila, and Morten Hjorth-Jensen, *Ground state magnetic dipole moment of 135I*, Nuclear Physics A, 644:277, 1998.
- 115. Fabio V. de Blasio, Morten Hjorth-Jensen, Oystein Elgaroy, Lars Engvik, Gianluca Lazzari, Marcello Baldo, and Hans-Josef Schulze, *Coherence lengths of neutron superfluids*, *Physical Review C*, 56:2332, 1997.
- 116. Lars Engvik, Morten Hjorth-Jensen, Ruprecht Machleidt, Herbert Muther, and Artur Polls, *Modern nucleon-nucleon potentials and symmetry energy in infinite matter*, *Nuclear Physics A*, 627:85, 1997.
- 117. Lars Engvik, Morten Hjorth-Jensen, Eivind Osnes, and T. Kuo, Ring-diagram calculations of nuclear matter with different model spaces, Nuclear Physics A, 622:553, 1997.
- 118. Anne Holt, Torgeir Engeland, Morten Hjorth-Jensen, Eivind Osnes, and Jouni Suhonen, The structure of the N=82 isotones with realistic effective interactions, Nuclear Physics A, 618:107, 1997.
- 119. N. Sandulescu, Roberto Liotta, Jan Blomqvist, Torgeir Engeland, Morten Hjorth-Jensen, Anne Holt, and Eivind Osnes, Generalized seniority scheme in light tin isotopes, Physical Review C, 55:2708, 1997.
- 120. Lars Engvik, Morten Hjorth-Jensen, Eivind Osnes, G. Bao, and Erlend Ostgaard, Asymmetric Nuclear Matter and Neutron Star Properties, Astrophysical Journal, 469:794, 1996.
- 121. Alessandro Drago, Umberto Tambini, and Morten Hjorth-Jensen, *Massive quarks in neutron stars*, *Physics Letters B*, 380:13, 1996.

- 122. Oystein Elgaroy, Lars Engvik, Morten Hjorth-Jensen, and Eivind Osnes, Model-space approach to ¹S₀ neutron and proton pairing in neutron star matter with the Bonn meson-exchange potentials, Nuclear Physics A, 604:466, 1996.
- 123. Oystein Elgaroy, Lars Engvik, Morten Hjorth-Jensen, and Eivind Osnes, Superfluidity in beta-stable neutron star matter, Physical Review Letters, 77:1428, 1996.
- 124. Oystein Elgaroy, Lars Engvik, Morten Hjorth-Jensen, and Eivind Osnes, Triplet pairing of neutrons in beta-stable neutron star matter. Nuclear Physics A, 607:425, 1996.
- 125. Oystein Elgaroy, Lars Engvik, Eivind Osnes, Fabio V. de Blasio, Gianluca Lazzari, and Morten Hjorth-Jensen, *Emissivities of neutrinos in neutron stars*, *Physical Review Letters*, 76:1994, 1996.
- 126. Oystein Elgaroy, Lars Engvik, Eivind Osnes, Fabio V. de Blasio, Gianluca Lazzari, and Morten Hjorth-Jensen, Superfluidity and neutron star crust matter, Physical Review D. Particles and fields, 54:1848, 1996.
- 127. Morten Hjorth-Jensen, Herbert Muther, Artur Polls, and Angels Ramos, Self-energy of Lambda in finite nuclei, Nuclear Physics A, 605:458, 1996.
- 128. Morten Hjorth-Jensen, Eivind Osnes, Herbert Muther, and Artur Polls, Comparison of the effective interaction to various orders in different mass regions, Journal of Physics G: Nuclear and Particle Physics, 22:321, 1996.
- 129. Morten Hjorth-Jensen, T. Kuo, and Eivind Osnes, Realistic effective interactions for nuclear systems, Physics Reports, 261:125, 1995.
- 130. G. Bao, Lars Engvik, Morten Hjorth-Jensen, Eivind Osnes, and Erlend Ostgaard, New equations of state for neutron stars, Nuclear Physics A, 575:707, 1994.
- 131. P. J. Ellis, Torgeir Engeland, Morten Hjorth-Jensen, Anne Holt, and Eivind Osnes, Convergence properties of the effective interaction, Nuclear Physics A, 573:216, 1994.
- 132. Lars Engvik, Morten Hjorth-Jensen, Eivind Osnes, G. Bao, and Erlend Ostgaard, Asymmetric nuclear matter and neutron star properties, Physical Review Letters, 73:2650, 1994.
- 133. Morten Hjorth-Jensen, Herbert Muther, and Artur Polls, Width of the Δ resonance in nuclei, Physical Review C, 50:501, 1994.
- 134. Torgeir Engeland, Morten Hjorth-Jensen, Anne Holt, and Eivind Osnes, The structure of the neutron deficient Sn isotopes, Physical Review C, 48:R535, 1993.

- 135. Morten Hjorth-Jensen, Marcello Borromeo, Herbert Muther, and Artur Polls, Isobar contributions to the imaginary part of the optical-model potential for finite nuclei, Nuclear Physics A, 551:580, 1993.
- 136. Morten Hjorth-Jensen, Mariana Kirchbach, Dan Olof Riska, and Kazuo Tsushima, Nuclear renormalization of the isoscalar axial coupling constants, Nuclear Physics A, 563:525, 1993.
- 137. Morten Hjorth-Jensen, Torgeir Engeland, Anne Holt, and Eivind Osnes, Effective interactions for valence-hole nuclei with modern meson-exchange potential models, Nuclear Physics A, 541:105, 1992.
- 138. Morten Hjorth-Jensen, Eivind Osnes, and T. Kuo, Effective interactions for valence-hole nuclei with modern meson-exchange potential models, Nuclear Physics A, 540:145, 1992.
- 139. Morten Hjorth-Jensen, Eivind Osnes, and Herbert Muther, Folded-Diagram effective interaction with the Bonn meson-exchange potential model, Annals of Physics, 213:102, 1992.
- 140. Morten Hjorth-Jensen and Kjell Aashamar, Oscillator strengths and lifetimes for low-lying terms in the Al isoelectronic sequence. Physica Scripta, 42:309, 1990.
- 141. Morten Hjorth-Jensen and Eivind Osnes, Number-conserving sets and effective interactions through third order for mass-18 with the Bonn potential, Physica Scripta, 41:207, 1990.
- 142. Morten Hjorth-Jensen, Eivind Osnes, Herbert Muther, and K. W. Schmid, Choice of single-particle potential and the convergence of the effective interaction, Physics Letters B, 248:243, 1990.
- 143. Morten Hjorth-Jensen and Eivind Osnes, Effective interactions through third order for mass-18 nuclei with the Paris potential, Physics Letters B, 228:281, 1989.

Contributions to Conference and Workshop Proceedings (refereed and non-refereed). TBA

Talks and seminar at workshops, conferences and institute colloquiua. TBA

Organization of workshops, schools and advanced courses. TBA

Member of Advisory Committees. TBA