

Publications
Yoram Alhassid

1. *Entropy and Chemical Change. III. The Maximal Entropy (subject to constraints) Procedure as a Dynamical Theory*
Y. Alhassid and R.D. Levine, J. Chem. Phys. **67**, 4321 (1977).
2. *Connection Between the Maximal Entropy and The Scattering Theoretic Analysis of Collision Processes*
Y. Alhassid and R.D. Levine, Phys. Rev. **A18**, 89 (1978).
3. *Heavy-Ion Transfer Reactions to the Continuum: Surprisal Analysis and the Condition of Maximal Entropy*
R.D. Levine, S.G. Steadman, J.S. Karp and Y. Alhassid, Phys. Rev. Lett. **41**, 1537 (1978).
4. *An Upper Bound for the Entropy and its Applications to the Maximal Entropy Problem*
Y. Alhassid, N. Agmon and R.D. Levine, Chem. Phys. Lett. **53**, 22 (1978).
5. *An Algorithm for Finding the Distribution of Maximal Entropy*
N. Agmon, Y. Alhassid and R.D. Levine, J. Computational Physics **30**, 250 (1979).
6. *An Algorithm for Determining the Lagrange Parameters in the Maximum Entropy Formalism*
N. Agmon, Y. Alhassid and R.D. Levine, The Maximum Entropy Formalism, edited by R.D. Levine and M. Tribus, (MIT Press, Cambridge, Massachusetts, 1979), p. 207.
7. *Collision Experiments with Partial Resolution of Final States: Maximum Entropy Procedure and Surprisal Analysis*
Y. Alhassid and R.D. Levine, Phys. Rev. **C20**, 1775 (1979).
8. *Information-Theoretic Analysis of Energy Disposal in Heavy-Ion Transfer Reactions*
Y. Alhassid, R.D. Levine, J.S. Karp and S.G. Steadman, Phys. Rev. **C20**, 1789 (1979).

9. *Heavy-Ion Transfer Reactions to Highly Excited States: A Constrained Phase-Space Analysis of Energy Spectra*
Y. Alhassid, R.D. Levine, J.S. Karp and S.G. Steadman, Nuclear Science Research Conference Series, Vol. 2: "Continuum Spectra of Heavy-Ion Reactions", edited by T. Tamura, J.B. Natowitz and D.H. Youngblood, pp. 179-185 (1979).
10. *Time Dependent Mean-Field Approximation to the Many-Body S-Matrix*
Y. Alhassid and S.E. Koonin, Proceeding of the Workshop on Nuclear Dynamics, Granlibakken, Tahoe City, California; LBL Report 10688 (1980).
11. *A Constrained Phase-Space Approach to Analysis of Nuclear Reactions Data*
Y. Alhassid, Invited talk in the American Physical Society Meeting, Washington, D.C., Caltech Preprint MAP 13 (1980).
12. *A Reduced Phase-Space Approach to Collision Processes*
Y. Alhassid and R.D. Levine, Chem. Phys. Lett. **72**, 401 (1980).
13. *Experimental and Inherent Uncertainties in the Information Theoretic Approach*
Y. Alhassid and R.D. Levine, Chem. Phys. Lett. **73**, 16 (1980).
14. *Mean Field Approximations to the Many-Body S-Matrix*
S.E. Koonin, Y. Alhassid and K.R. Sandhya Devi, Proceedings of the 2nd International Conference on Recent Progress in Many-Body Theories, Oaxtepec (1981).
15. *Mean Field Approximations for Inclusive Observables*
Y. Alhassid, B. Muller and S.E. Koonin, Phys. Rev. **C23**, 487 (1981).
16. *Mean Field Approximation to the Many-Body S-Matrix*
Y. Alhassid and S.E. Koonin, Phys. Rev. **C23**, 1590 (1981).
17. *Distortions in the Cosmic Background Radiation and Big-Bang ^4He Nucleosynthesis*
G.J. Mathews, Y. Alhassid and G. Fuller, Astrophys. J. **246**, 361 (1981).
18. *Radiative Width of Molecular-Cluster States*
Y. Alhassid, M. Gai and G.F. Bertsch, Phys. Rev. Lett. **49**, 1482 (1982).
19. *Potential Scattering, Transfer Matrix and Group Theory*
Y. Alhassid, F. Gürsey and F. Iachello, Phys. Rev. Lett. **50**, 873 (1983).
20. *Group Theory Approach to Scattering and Band Structure Problems*
Y. Alhassid, in Boson Models in Nuclei, D.H. Feng et al, eds., World Scientific, Singapore (1984).

21. *Group Theory Approach to Scattering*
Y. Alhassid, F. Gürsey and F. Iachello, Ann. Phys. (N.Y.) **148**, 346 (1983).
22. *Group Theory of the Morse Potential*
Y. Alhassid, F. Gürsey and F. Iachello, Chem. Phys. Lett. **99**, 27 (1983).
23. *A Unified Variational Principle for the Information Theoretic Analysis of Data and its Scatter*
J. Manoyan and Y. Alhassid, Chem. Phys. Lett. **101**, 265 (1983).
24. *Level Density Calculations of Heavy Nuclei at High Excitation Energies*
Y. Alhassid and J. Manoyan, Proceedings of the International Conference on Nuclear Physics, Florence, Vol. 1, p. 301 (1983).
25. *Phenomenology of Shape Transitions in Hot Nuclei*
S. Levit and Y. Alhassid, Nucl. Phys. **A413**, 439 (1984).
26. *Monte Carlo Method for the Many-Body Scattering Problem*
Y. Alhassid and S.E. Koonin, Ann. Phys. (N.Y.) **155**, 108 (1984).
27. *Extended Time-Dependent Mean-Field Theories from the Maximum Entropy Principle*
H. Reinhardt, R. Balian and Y. Alhassid, Nucl. Phys. **A422**, 349 (1984).
28. *Approximation Methods for the Nuclear Thermodynamic Functions and Their Validity in a Solvable Model*
Y. Alhassid and J. Zingman, Phys. Rev. **C30**, 684 (1984).
29. *Group Theory Methods for Scattering Problems*
Y. Alhassid, Proceedings of Seventh Oaxtepec Symposium on Nuclear Physics (1984).
30. *Algebraic Calculation of the Morse Oscillator Scattering Matrix*
Y. Alhassid, Chem. Phys. Lett. **108**, 79 (1984).
31. *An Algebraic Approach to the Morse Potential Scattering*
Y. Alhassid and J. Wu, Chem. Phys. Lett. **109**, 81 (1984).
32. *An Algebraic Approach to Scattering and Band Structure Problems*
Y. Alhassid, in Group Theoretical Methods in Physics, W.W. Zachary, ed. World Scientific, Singapore, pp. 337-347 (1984).
33. *An Algebraic Approach to the S-Matrix*
Y. Alhassid, J. Engel and J. Wu, Phys. Rev. Lett. **53**, 17 (1984).

34. *A geometric approach to dissipation and its applications to dissipative nuclear dynamics*
H. Reinhardt, R. Balian and Y. Alhassid, *Journal de Physique* **45**, 87 (1984).
35. *Path-Integral Monte-Carlo Calculations of ^4He and ^6Li*
Y. Alhassid, G. Maddison, K. Langanke, K. Chow and S.E. Koonin, *Z. Phys.* **A321**, 677 (1985).
36. *Formal Scattering Theory by an Algebraic Approach*
Y. Alhassid and R.D. Levine, *Phys. Rev. Lett.* **54**, 739 (1985).
37. *Evidence for Phase Space Transitions in Excited Triatomic Molecules*
I. Benjamin, Y. Alhassid and R.D. Levine, *Chem. Phys. Lett.* **115**, 113 (1985).
38. *Algebraic Approach to Scattering*
Y. Alhassid, in *Nuclear Shell Models*, M. Vallieres and B.H. Wildenthal, eds., World Scientific, Singapore, pp. 258-270 (1985).
39. *Resonance Widths and Positions by Algebraic Approach*
Y. Alhassid, F. Iachello and R.D. Levine, *Phys. Rev. Lett.* **54**, 1746 (1985).
40. *Dissipation in many body systems: A Geometrical Approach Based on Information Theory*
R. Balian, Y. Alhassid and H. Reinhardt, *Physics Reports* **131**, 1 (1986).
41. *Group Theory Approach to Scattering: II. The Euclidean Connection*
Y. Alhassid, F. Gürsey and F. Iachello, *Ann. Phys. (N.Y.)* **167**, 181 (1986).
42. *Dynamic Symmetries in Scattering*
Y. Alhassid, F. Iachello and J. Wu, *Phys. Rev. Lett.* **56**, 271 (1986).
43. *Group Theory Approach to Scattering III. Realistic Models*
J. Wu, F. Iachello and Y. Alhassid, *Ann. Phys. (N.Y.)* **173**, 68 (1987).
44. *Contractions and Expansions of Lie Groups and the Algebraic Approach to Scattering*
A. Frank, Y. Alhassid and F. Iachello, *Phys. Rev.* **A34**, R667 (1986).
45. *Universal Features of Shape Transitions in Hot Rotating Nuclei*
Y. Alhassid, S. Levit and J. Zingman, *Phys. Rev. Lett.* **57**, 539 (1986).
46. *Transition Strength Fluctuations and the Onset of Chaotic Motion*
Y. Alhassid and R.D. Levine, *Phys. Rev. Lett.* **57**, 2879 (1986).

47. *An Algebraic Approach to Dissociation*
Y. Alhassid, J. Engel and F. Iachello, Phys. Rev. Lett. **57**, 9 (1986).
48. *Transition Strength Fluctuations and the Onset of Chaos*
Y. Alhassid, Proceedings of the First International Conference on the Physics of Phase-Space, Zachary and Kim, eds., Springer-Verlag, (1986).
49. *Landau Theory of Shape Transitions in Hot Rotating Nuclei*
Y. Alhassid, S. Levit and J. Zingman, Nucl. Phys. **A469**, 205 (1987).
50. *The Euclidean Connection and the Algebraic Theory of Scattering*
Y. Alhassid, in Symmetries in Science II, pp. 29-36, B. Gruber, ed., Plenum Press, New York (1986).
51. *Group Theory Approach to Scattering and its Application to Heavy-ion Collisions*
Y. Alhassid, in Nuclear Structure, Reactions and Symmetries, R.A. Meyer and V. Paar, eds., World Scientific, Singapore (1987).
52. *Group Deformations and the Algebraic Scheme for Scattering*
Y. Alhassid, A. Frank and F. Iachello, in Nuclear Structure Reactions and Symmetries, R.A. Meyer and V. Paar, eds.; World Scientific, Singapore (1987).
53. *An Algebraic Approach to Dissociation*
Y. Alhassid, in Group Theoretical Methods in Physics (1986).
54. *Dynamical Symmetries of the Perturbed Hydrogen Atoms: A New View of the van der Waals Interaction*
Y. Alhassid, E.A. Hinds and D. Meschede, Phys. Rev. Lett. **59**, 1545 (1987).
55. *New Deformation Effects in Nuclei*
K.A.Snover, F.S. Stephens and Y. Alhassid, Physics Today, January 1988, Physics News in 1987, p. s-55.
56. *Shape Transitions and Giant Dipole Resonances in Hot Rotating Nuclei*
Y. Alhassid, The Texas A&M Symposium on Hot Nuclei, S. Shlomo, R.P. Schmidt and J.B. Natowitz, eds., World Scientific, Singapore, 1988, pp. 95-114.
57. *Landau Theory of Shapes, Shape Fluctuations and Giant Dipole Resonances*
Y. Alhassid, B. Bush and S. Levit, Nucl. Phys. **A482**, 570 (1988).
58. *Shape Changes and Giant Dipole Resonances in Hot Rotating Nuclei*
Y. Alhassid, Proceedings of the Conferences on High Spin Nuclear Structure and Novel Nuclear Shapes, Argonne National Laboratory, 1988, ANL-PHY-88-2.

59. *Statistical Fluctuations of Matrix Elements in Regular and Chaotic Systems*
Y. Alhassid and M. Feingold, Phys. Rev. **A39**, 374 (1989).
60. *Thermal Shape Fluctuations, Landau Theory and Giant Dipole Resonances in Hot Rotating Nuclei*
Y. Alhassid, B. Bush and S. Levit, Phys. Rev. Lett. **61**, 1926 (1988).
61. *A Study of Heavy Ion Reactions in the Algebraic Scattering Theory*
Y. Alhassid, F. Iachello and B. Shao, Phys. Rev. Lett. **B201**, 183 (1988).
62. *Simple Systematics of the Shape Transitions in Hot Rare-Earth Nuclei*
Y. Alhassid, J. Manoyan and S. Levit, Phys. Rev. Lett. **63**, 31 (1989).
63. *Group Theory Approach to Relativistic Scattering*
Y. Alhassid, F. Gürsey and F. Iachello, J. Phys. **A22**, L947 (1989).
64. *Nearest Neighbor Level Spacing Distributions: on the Transition from the Regular to the Chaotic Regimes*
Y. Alhassid and R.D. Levine, Phys. Rev. **A40**, 5277 (1989).
65. *A Stochastic Approach to Giant Dipole Resonances in Hot Rotating Nuclei*
Y. Alhassid and B. Bush, Phys. Rev. Lett. **63**, 2452 (1989).
66. *Algebraic Approach to Heavy Ion Reactions*
Y. Alhassid and F. Iachello, Nucl. Phys. **A501**, 585 (1989).
67. *Group Theory Approach to Scattering: IV. Solvable Potentials*
J. Wu, Y. Alhassid and F. Gürsey, Ann. Phys. (N.Y.) **196**, 163 (1989).
68. *Nuclear Structure: Hot Nuclei and Rapidly Rotating Superdeformed Nuclei*
Y. Alhassid and P.J. Twin, in *McGraw-Hill Yearbook of Science and Technology*, pp. 242-249, McGraw Hill, New York (1989).
69. *Effects of Thermal Fluctuations on Giant Dipole Resonances in Hot Rotating Nuclei*
Y. Alhassid and B. Bush, Nucl. Phys. **A509**, 461 (1990).
70. *Time-Dependent Fluctuations and the Giant Dipole Resonance in Hot Nuclei: Realistic Calculations*
Y. Alhassid and B. Bush, Nucl. Phys. **A514**, 434 (1990).
71. *The Potential Group Approach and Hypergeometric Differential Equations*
J. Wu and Y. Alhassid, J. Math. Phys. **31**, 552 (1990).

72. *Orientation Fluctuations and the Angular Distribution of the Giant Dipole Resonance γ -Rays in Hot Rotating Nuclei*,
Y. Alhassid and B. Bush, Phys. Rev. Lett. **65**, 2527 (1990).
73. *Quantum Chaos in the Low-Lying Collective States of Even-Even Nuclei*
Y. Alhassid, A. Novoselsky and N. Whelan, Phys. Rev. Lett. **65**, 2791 (1990).
74. *Landau Theory and Shape Fluctuations in Hot Rotating Nuclei*
Y. Alhassid, Proc. Int. Conf. on High Spin Physics and Gamma-Soft Nuclei, J.X. Saladin, R.A. Sorenson and C.M. Vincent, eds., World Scientific, Singapore, pp. 15-30 (1991).
75. *Time-Dependent Fluctuations and the Giant Dipole Resonance in Hot Nuclei: Solvable Models*
Y. Alhassid and B. Bush, Nucl. Phys. **A531**, 1 (1991).
76. *On the Width of the Giant Dipole Resonance in Deformed Nuclei*
B. Bush and Y. Alhassid, Nucl. Phys. **A531**, 27 (1991).
77. *Effects of Orientation Fluctuations on the Angular Distribution of the Giant Dipole Resonance γ -Rays in Hot Rotating Nuclei*
Y. Alhassid and B. Bush, Nucl. Phys. **A531**, 39 (1991).
78. *Chaos in the Low-Lying Collective States of Even-Even Nuclei*
Y. Alhassid and N. Whelan, Phys. Rev. **C43**, 2637 (1991).
79. *Hot Nuclei - Landau Theory, Thermal Fluctuations and Dissipation*
Y. Alhassid, in *New Trends in Nuclear Collective Dynamics*, pp. 41 - 91, Y. Abe, H. Horiuchi and K. Matsuyanagi, eds., Springer Verlag, New York (1991).
80. *Chaos in the Low-Lying Collective States of Nuclei*
Y. Alhassid, Proceeding of the Yukawa Institute Workshop, *New Trends in Nuclear Collective Dynamics*, Soryushiron Kenkyu (Kyoto) **83**, 4 (1991).
81. *Chaotic Properties of the Interacting Boson Model: A Discovery of a New Regular Region*
Y. Alhassid and N. Whelan, Phys. Rev. Lett. **67**, 816 (1991).
82. *Statistical Nuclear Behavior: Finite-Temperature and Chaotic Phenomena*
Y. Alhassid, C. Baktash and A. Goodman, Proc. Int. Conf. on Future Directions in Nuclear Physics, J. Dudek and B. Haas, eds., American Institute of Physics Conference Proceedings **259**, 407 (1992).

83. *Chaos in the Low-Lying Collective States of Nuclei*
Y. Alhassid, Proc. Int. Conf. on Future Directions in Nuclear Physics, J. Dudek and B. Haas, eds., American Institute of Physics Conference Proceedings **259**, 444 (1992).
84. *Lower Bound on the Critical Energy for the Onset of Chaos and the Chaotic Dynamical Aperture of Large Accelerators*
Y. Gürsey and Y. Alhassid, Phys. Rev. A **45**, 2586 (1992).
85. *Chaos in the Low-Lying Collective States of Nuclei: Quantal Fluctuations*
Y. Alhassid and A. Novoselsky, Phys. Rev. **C45**, 1677 (1992).
86. *Quantal and Thermal Zero Point Formulae of Barrier Transmission Probability*
N. Takigawa, Y. Alhassid and B. Balantekin, Phys. Rev. **C45**, 1850 (1992).
87. *Classical and Quantal Chaos in the Collective Dynamics of Nuclei*
Y. Alhassid, N. Whelan and A. Novoselsky, Mod. Phys. Lett. **A7**, 2453 (1992).
88. *A Lower Bound on the Critical Energy for the Onset of Chaos and the Chaotic Dynamical Aperture of Large Accelerators*
Y. Gürsey and Y. Alhassid, Phys. Rev. **A45**, 2586 (1992).
89. *Statistical Theory of Coulomb Blockade Oscillations: Quantum Chaos in Quantum Dots*
R.A. Jalabert, A.D. Stone and Y. Alhassid, Phys. Rev. Lett. **68**, 3468 (1992).
90. *Algebraic-Eikonal Approach to Electron-Molecule Scattering: I. Generalized Formalism*
Y. Alhassid and B. Shao, Phys. Rev. **A46**, 3978 (1992).
91. *Algebraic-Eikonal Approach to Electron-Molecule Scattering: II. Ro-vibrational Excitations*
Y. Alhassid and B. Shao, Phys. Rev. **A46**, 3991 (1992).
92. *The Spectral Autocorrelation Function in the Statistical Theory of Energy Levels*
Y. Alhassid and R.D. Levine, Phys. Rev. **A46**, 4650 (1992).
93. *Algebraic Rotating Frame Approach to Electron-Molecule Scattering: Hybrid Calculation*
Y. Alhassid, V. Liu and B. Shao, Phys. Rev. **A46**, 3865 (1992).

94. *The Giant Dipole Resonance in Hot Rotating Nuclei*
Y. Alhassid, Conference on Giant Resonances and Related Phenomena, U. Garg, ed., University of Notre Dame Report (1992).
95. *Statistical Theory of Coulomb Blockade and Resonant Tunneling Oscillations in Quantum Dots*
A.D. Stone, R.A. Jalabert and Y. Alhassid, in *Transport Phenomena in Mesoscopic Systems*, pp. 39 - 52, eds. H. Fukuyama and T. Ando, Springer Verlag, New York (1992).
96. *Chaos in Nuclei with Broken Pairs*
Y. Alhassid and D. Vretenar, Phys. Rev. **C46**, 1334 (1992).
97. *Partial Dynamical Symmetry*
Y. Alhassid and A. Leviatan, J. Phys. **A25**, L 1265 (1992).
98. *The Systematics of the Landau Expansion in Hot Nuclei*
Y. Alhassid and B. Bush, Nucl. Phys. **A549**, 12 (1992).
99. *Nuclear Level Densities in the Static Path Approximation: I. A. Solvable Model*
Y. Alhassid and B. Bush, Nucl. Phys. **A549**, 43 (1992).
100. *Chaotic Properties of the Interacting Boson Model*
N. Whelan and Y. Alhassid, Nucl. Phys. **A556**, 42 (1993).
101. *Partial Dynamical Symmetry*
Y. Alhassid and A. Leviatan, Group Theoretical Methods in Physics, Anales de Fisica, Monografias, Vol. 1, p. 291 (1993).
102. *Hot Rotating Nuclei*
Y. Alhassid, Nucl. Phys. **A553**, 137c (1993).
103. *Two-Time Influence Functional Method to Multi-Dimensional Quantum Tunneling*
B. Balantekin, N. Takigawa and Y. Alhassid, Proceedings of the Fourth Inst. Symp. Foundations of Quantum Mechanics, Tokyo, 1992, JJAP Series **9**, 90 (1993).
104. *Evidence for a Phase Transition in the Nuclear Shape at Finite Temperature and Rapid Rotation*
M. Kicinska-Habior, K.A. Snover, J.A. Behr and C.A. Gossett, Y. Alhassid and N. Whelan, Phys. Lett. **B308**, 225 (1993).
105. *The Onset of Chaos and its Signature in the Spectral Autocorrelation Function*
Y. Alhassid and N. Whelan, Phys. Rev. Lett. **70**, 572 (1993).

106. *Algebraic Rotating Frame Approach to Electron-Molecule Scattering*
Y. Alhassid, V. Liu and B. Shao, Phys. Rev. **A48**, 2832 (1993).
107. *Nuclear Level Densities in the Static Path Approximation: II. Spin Dependence*
Y. Alhassid and B. Bush, Nucl. Phys. **A565**, 399 (1993).
108. *GDR Dissipation and Shape Evolution in Hot Fast-Rotating Dy Nuclei*
J.P.S. van Schagen, Y. Alhassid, J.C. Bacelar, B. Bush, M.N. Harakeh, W.H.A. Hesselink, H.J. Hofmann, N. Kalatnar-Nayestanaki, R.F. Noorman, A.J.M. Plompen, A. Stolk, Z. Sujkowski and A. van der Woude, Phys. Lett. **B308**, 231 (1993).
109. *Partial Dynamical Symmetry and the Suppression of Chaos*
N. Whelan, Y. Alhassid and A. Leviatan, Phys. Rev. Lett. **71**, 2208 (1993).
110. *The Jacobi Transition and the Giant Dipole Resonance in Rapidly Rotating Hot Nuclei*
Y. Alhassid and N. Whelan, Nucl. Phys. **A565**, 427 (1993).
111. *Algebraic Methods in Scattering*
Y. Alhassid, in Lie Algebras, Cohomology and New Applications to Quantum Mechanics, Contemporary Mathematics **160**, 15 (1994).
112. *Dynamical Symmetry Breaking and the Onset of Chaos in the Interacting Boson Model of Nuclei*
Y. Alhassid, Symmetries in Science VII, B. Gruber, ed., Plenum Press (1994).
113. *Non-Generic Nuclear Spectral Fluctuations*
B. Lauritzen, Y. Alhassid and N. Whelan, Phys. Rev. Lett. **72**, 2809 (1994).
114. *Practical Solution to the Monte Carlo Sign Problem: Realistic Calculations of ^{54}Fe*
Y. Alhassid, D.J. Dean, S.E. Koonin, G. Lang and W.E. Ormand, Phys. Rev. Lett. **72**, 613 (1994).
115. *The Giant Dipole Resonance in Hot Rotating Nuclei*
Y. Alhassid, Nucl. Phys. A **569**, 37c (1994).
116. *Complete $0\hbar\omega$ Calculations of Gamow-Teller Strengths for Nuclei in the Iron Region*
D.J. Dean, P.B. Radha, K. Langanke, Y. Alhassid, S.E. Koonin and W.E. Ormand, Phys. Rev. Lett. **72**, 4066 (1994).

117. *Deformed Gaussian Orthogonal Ensemble Analysis of the Interacting Boson Model*
M.P. Pato, C.A. Nunes, C.L. Lima, M.S. Hussein and Y. Alhassid, Phys. Rev. C **49**, 2919 (1994).
118. *Algebraic Rotating Frame Approach to Nuclear Reactions*
Y. Alhassid and H. Attias, Nucl. Phys. A **577**, 709 (1994).
119. *Chaos in the Collective Dynamics of Nuclei*
Y. Alhassid, Proc. Int. Conference on the occasion of the 20th Anniversary of the Interacting Boson Model, Padova, Italy, R. Casten and A. Vitturi, World Scientific (1995).
120. *GDR γ -ray decay in $^{156}\text{Dy}^*$ from Regions Selected on Temperature and Angular Momentum*
J.P.S. van Schagen, Y. Alhassid, J.C. Bacelar, B. Bush, M.N. Harakeh, W.H.A. Hesselink, H.J. Hofmann, N. Kalatnar-Nayestanaki, R.F. Noorman, A.J.M. Plompen, A. Stolk, Z. Sujkowski and A. van der Woude, Phys. Lett. B **343**, 64 (1995).
121. *Thermal Properties of ^{54}Fe*
D.J. Dean, S.E. Koonin, K. Langanke, P.B. Radha and Y. Alhassid, Phys. Rev. Lett. **74**, 2909 (1995).
122. *Universal Parametric Correlations of Eigenfunctions in Chaotic and Disordered Systems*
Y. Alhassid and H. Attias, Phys. Rev. Lett. **74**, 4635 (1995).
123. *Spin-Dependent Shape Changes in Light-Medium Mass Compound Nuclei*
Z.M. Drebi, K.A. Snover, A.W. Charlop, M.S. Kaplan, D.P. Wells, D. Ye and Y. Alhassid, Phys. Rev. C **52**, 578 (1995).
124. *Shell-model Studies of fp-shell Nuclei*
K. Langanke, D.J. Dean, P.B. Radha, Y. Alhassid and S.E. Koonin, Phys. Rev. C **52**, 718 (1995).
125. *The Statistical Distributions of Level Widths and Conductance Peaks in Irregularly Shaped Quantum Dots*
Y. Alhassid and C. H. Lewenkopf, Phys. Rev. Lett. **75**, 3922 (1995).
126. *Gaussian Random Matrix Process and Universal Parametric Correlations in Complex Systems*
H. Attias and Y. Alhassid, Phys. Rev. E **52**, 4776 (1995).

127. *Universal Parametric Correlations of Conductance Peaks in Quantum Dots*
Y. Alhassid and H. Attias, Phys. Rev. Lett. **76**, 1711 (1996).
128. *Gaussian Processes and Universal Parametric Decorrelations of Wavefunctions*
D. Mitchell, Y. Alhassid and D. Kusnezov, Phys. Lett. A **215**, 21 (1996).
129. *The Giant Dipole Resonance in Hot Rotating Nuclei*
Y. Alhassid, in the Proceedings of the Mazurian Lake Summer School (1996).
130. *Universal Correlations of Coulomb Blockade Conductance Peaks and the Rotation Scaling in Quantum Dots*
Y. Alhassid and H. Attias, Phys. Rev. B **54**, 2696 (1996).
131. *Shell Model Monte Carlo Studies of γ -Soft Nuclei*
Y. Alhassid, G.F. Bertsch, D.J. Dean and S.E. Koonin, Phys. Rev. Lett. **77**, 1444 (1996).
132. *Signatures of Chaos in the Statistical Distribution of Conductance Peaks in Quantum Dots*
Y. Alhassid and C.H. Lewenkopf, Phys. Rev. B **55**, 7749 (1997).
133. *The Perturbed Static Path Approximation: Observables and Strength Functions*
H. Attias and Y. Alhassid, Nucl. Phys. A **625**, 565 (1997).
134. *Total and parity-Projected Level Densities Iron-Region Nuclei in the Auxiliary Fields Monte Carlo Shell Model*
H. Nakada and Y. Alhassid, Phys. Rev. Lett. **79**, 2939 (1997).
135. *Mean-Field and Beyond: Quantum Monte Carlo Methods for Finite Fermi Systems*
Y. Alhassid, Czech. J. Phys. **48**, 659 (1998).
136. *Shell Model Monte Carlo Methods and their Application to Nuclear Level Densities*
H. Nakada and Y. Alhassid, JPS (Japanese Physics Today) **53**, 189 (1998).
137. *Scaling Properties of the Giant Dipole Resonance Width in Hot Rotating nuclei*
D. Kusnezov, Y. Alhassid and K. Snover, Phys. Rev. Lett. **81**, 542 (1998).
138. *Total and Parity-Projected Level Densities of Iron-Region Nuclei by the Shell Model Monte Carlo Method*
H. Nakada and Y. Alhassid, Proceedings of the International Conference on Innovative Computational Methods in Nuclear Many-Body Problems, Osaka, Japan, World Scientific (1998).

139. *Coulomb blockade conductance peak distributions in quantum dots and the crossover between orthogonal and unitary symmetry*
Y. Alhassid, J.N. Hormuzdiar and N.D. Whelan, Phys. Rev. B **58**, 4866 (1998).
140. *Photodissociation in Quantum Chaotic Systems: Random Matrix Theory of Cross-Section Autocorrelations*
Y. Fyodorov and Y. Alhassid, Rapid Communication, Phys. Rev. A **58**, 3375 (1998).
141. *Conductance Peak Distributions in Quantum Dots at Finite Temperature: Signatures of the Charging Energy*
Y. Alhassid, M. Gökçedağ and A.D. Stone, Rapid Communication, Phys. Rev. B **58**, R 7524 (1998).
142. *Microscopic Nuclear Level Densities from Fe to Ge by the Shell Model Monte Carlo Method*
H. Nakada and Y. Alhassid, Phys. Lett. B **436**, 231 (1998).
143. *Weak Localization in the Conductance Peaks of Coulomb Blockade Quantum Dots*
Y. Alhassid, Rapid Communication, Phys. Rev. B **58**, 13383 (1998).
144. *The Spectral Autocorrelation Function and Survival Probability in Weakly Open Chaotic Systems*
Y. Alhassid and Y. V. Fyodorov, J. Phys. Chem. A **102**, 9577 (1998).
145. *Changing the Electronic Spectrum of a Quantum Dot by Adding Electrons*
S. R. Patel, D. R. Stewart, C. M. Marcus, M. Gökçedağ, Y. Alhassid, A. D. Stone, C. I. Duruoz and J. S. Harris Jr., Phys. Rev. Lett. **81**, 5900 (1998).
146. *Giant Dipole Resonances in Hot Rotating Nuclei: Overview and Recent Advances*
Y. Alhassid, Nucl. Phys. A **649**, 107c (1999).
147. *Exclusive Studies of the Giant Dipole Resonance in Excited Nuclei*
V. Nanal, BB. Back, D.J. Hofman, G. Hackman G, D. Ackermann, S. Fischer, D. Henderson, R.V.F. Janssens, T.L. Khoo, A.A. Sonzogni and Y. Alhassid, Nucl. Phys. A **649**, 153c (1999).
148. *Systematics of the Nuclear Giant Dipole Resonance*
D. Kusnezov, Y. Alhassid and K. Snover, Nucl. Phys. A **649**, 193c (1999).
149. *Scaling Properties and the Behavior of the Nuclear Giant Dipole Resonance Under Extreme Conditions*

- D. Kusnezov, Y. Alhassid and K. Snover, in the proceedings of *Collective Excitations in Fermi and Bose Systems*, World Scientific (1999).
150. *Monte Carlo Methods for the Nuclear Shell Model: Recent Applications*
Y. Alhassid, in the proceedings of *Highlights of Modern Nuclear Structure*, World Scientific (1999).
151. *Particle-number Reprojection in the Shell Model Monte Carlo Method: Application to Nuclear Level Densities*
Y. Alhassid, S. Liu and H. Nakada, Phys. Rev. Lett. **83**, 4265 (1999).
152. *Finite Temperature Effects in Coulomb Blockade Quantum Dots and Signatures of Spectral Scrambling*
Y. Alhassid and S. Malhotra, Phys. Rev. B **60**, R 16315 (1999).
153. *Random Matrix Model for Quantum Dots with Interactions: Universality of the Conductance Peak Spacing Distribution*
Y. Alhassid, Ph. Jacquod and A. Wobst, Phys. Rev. B **61**, R 13357 (2000).
154. *Level Densities by Particle Reprojection Monte Carlo Methods*
S. Liu, Y. Alhassid and H. Nakada, Capture Gamma-Ray Spectroscopy and Related Topics, Tenth International Symposium Santa Fe, New Mexico 1999, S. Wender, Ed., AIP press, p. 526 (2000).
155. *Parity Dependence of Level Densities*
Y. Alhassid, G.F. Bertsch, S. Liu and H. Nakada, Phys. Rev. Lett. **84**, 4313 (2000).
156. *The Statistical Theory of Quantum Dots*
Y. Alhassid, Rev. Mod. Phys. **72**, 895 (2000).
157. *Dynamics of Complex Systems*
Y. Alhassid, B. Mehlige and M. Wilkinson, eds., Physica E **9**, issue 3 (2001).
158. *Fluctuations of Interactions and Coulomb Blockade Peak Spacings Distribution*
Y. Alhassid, Ph. Jacquod and A. Wobst, Physica E **9**, 393 (2001).
159. *Shell Model Monte Carlo Approach to Nuclear Level Densities*
H. Nakada, Y. Alhassid and S. Liu, Proceedings of the shell model conference, RIKEN, World Scientific (2001).
160. *Giant Dipole Resonances in Hot, Rotating Nuclei: Nuclear Shapes and Shell Corrections*

- D.Kusnezov, Y. Alhassid, K.A. Snover, and W.E. Ormand, Nucl. Phys. A **687**, 212c (2001).
161. *Chaos and Interactions in Quantum Dots*
Y. Alhassid, Nobel Symposium 2000, Physica Scripta **T90**, 80 (2001).
 162. *Quantum Monte Carlo Methods for the Nuclear Shell Model at Finite Temperature*
Y. Alhassid, in Festschrift in honor of A. Richter, Nucl. Phys. A **690**, 163c (2001).
 163. *Quantum Monte Carlo Methods for Nuclei at Finite Temperature*
Y. Alhassid, Int. J. Mod. Phys. B **15**, 1447 (2001).
 164. *Signature of a Pairing Transition in the Heat Capacity of Finite Nuclei*
S. Liu and Y. Alhassid, Phys. Rev. Lett. **87**, 022501 (2001).
 165. *Spectral Scrambling in Coulomb-blockade Quantum Dots*
Y. Alhassid and Y. Gefen, cond-mat/0101461 (2001).
 166. *Random Interaction Matrix Model and the Conductance Peak Height Statistics in Quantum Dots*
Y. Alhassid and A. Wobst, Phys. Rev. B, Rapid Comm. **65**, 041304 (2002).
 167. *Signatures of Inelastic Scattering in Coulomb-blockade Quantum Dots*
T. Rupp, Y. Alhassid and S. Malhotra, Phys. Rev. B **65**, 193304 (2002).
 168. *Chaos and Interactions: from Nuclei to Quantum Dots*
Y. Alhassid, Proc. Int. Conf. *Challenges of Nuclear Structure*, World Scientific (2002).
 169. *Quantum Monte Carlo Methods for the Nuclear Many-Body Problem at Finite Temperature*
Y. Alhassid, Proceedings of *The Nuclear Many-Body Problem 2001*, p. 49, NATO Advanced Research Workshop, W. Nazarewicz and D. Vretenar, eds., Kluwer Academic Publishers (2002).
 170. *Statistical Fluctuations of Electromagnetic Transition Intensities and Moments in fp-Shell Nuclei*
A. Hamoudi, R.G. Nazmitdinov, E. Shahaliev and Y. Alhassid, Phys. Rev. C **65**, 064311 (2002).
 171. *Spin and Interaction Effects in Quantum Dots: a Hartree-Fock-Koopmans Approach*
Y. Alhassid and S. Malhotra, Phys. Rev. B **66**, 245313 (2002).

172. *Microscopic Nuclear Level Densities by the Shell Model Monte Carlo Method*
Y. Alhassid, Proceedings of the *Capture Gamma-Ray Spectroscopy and Related Topics, Eleventh International Symposium*, J. Kvasil, P. Cejnar, and M. Kriticcka, eds., p. 373, World Scientific (2003).
173. *The Importance of Parity-Dependence of the Nuclear Level Density in the Prediction of Astrophysical Reaction Rates*
D. Mocalj, T. Rauscher, G. Martinez-Pinedo and Y. Alhassid, Proceedings of the *Capture Gamma-Ray Spectroscopy and Related Topics, Eleventh International Symposium*, J. Kvasil, P. Cejnar, and M. Kriticcka, eds., p. 781, World Scientific (2003).
174. *Level Densities of $N \sim Z$ Nuclei using exact isospin Projection in the Shell Model Monte Carlo Method*
H. Nakada and Y. Alhassid, Proceedings of the *Capture Gamma-Ray Spectroscopy and Related Topics, Eleventh International Symposium*, J. Kvasil, P. Cejnar, and M. Kriticcka, eds., p. 785, World Scientific (2003).
175. *Influence of Parity-dependence in the Nuclear Level Density on the Prediction of Astrophysical Reaction Rates*
D. Mocalj, T. Rauscher, G. Martinez-Pinedo and Y. Alhassid, Nucl. Phys. A **718**, 650c (2003).
176. *Microscopic Nuclear Level Densities by the Shell Model Monte Carlo Method*
H. Nakada and Y. Alhassid, Nucl. Phys. A **718**, 691c (2003).
177. *Effects of Spin and Exchange Interaction on the Coulomb-blockade Peak Statistics in Quantum Dots*
Y. Alhassid and T. Rupp, Phys. Rev. Lett. **91**, 056801 (2003).
178. *Nuclear Level Statistics: Extending the Shell Model Theory to Higher Temperatures*
Y. Alhassid, G.F. Bertsch, and L. Fang, Phys. Rev. C **68**, 044322 (2003).
179. *A Universal Hamiltonian for a Quantum Dot in the Presence of Spin-orbit Interaction*
Y. Alhassid and T. Rupp, cond-mat/0312691.
180. *Thermal Signatures of Phase Transitions in Finite Nuclei*
Y. Alhassid, Proc. of Symmetries in Nuclear Structure, Ettore Majorana Centre, Erice, Italy, p. 156, World Scientific (2004).
181. *Highly Selective Studies of Giant Dipole Resonance in ^{164}Er*
Nanal V, Khoo TL, Hofman DJ, Back BB, Carpenter MP, Dioszegi I, Eisenman K,

- Halbert ML, Heckman P, Heinz AM, Henderson D, Jenkins D, Kelly MP, Kondev FG, Lauritsen T, Lister CJ, McClintock B, Mitsuoka S, Pennington T, Seitz J, Siemssen RH, Thoennessen M, van Swol RJ, Varner RL, Wilt P, and Y. Alhassid, Nucl. Phys. A **731**, 153 (2004).
182. *Linear Conductance in Coulomb-blockade Quantum Dots in the Presence of Interactions and Spin*
Y. Alhassid, T. Rupp, A. Kaminski, and L.I. Glazman, Phys. Rev. B **69**, 115331 (2004).
183. *Disordered Systems with Interactions: Induced Two-body Ensembles and the Hartree-Fock Approach*
Y. Alhassid, H.A. Weidenmüller, and A. Wobst, Phys. Rev. B **72**, 045318 (2005).
184. *Statistical Properties of Nuclei by the Shell Model Monte Carlo Method*
Y. Alhassid, Proceedings of the International Conference on Nuclear Data for Science and Technology, R.C. Haight, M.B. Chadwick, T. Kawano, and P. Talou, eds., American Institute of Physics Conference Proceedings **769**, p. 1283, New York (2005).
185. *Mesoscopic Fluctuations in Quantum Dots, Nanoparticles and Nuclei*
Y. Alhassid, Proceedings of the conference on Nuclei and Mesoscopic Physics, V. Zelevinsky, ed., American Institute of Physics Conference Proceedings **777**, pp. 250-269, New York (2005).
186. *The Nuclear Moment of Inertia and Spin Distribution of Nuclear Levels*
Y. Alhassid, G.F. Bertsch, L. Fang, and S. Liu, Phys. Rev. C **72**, 064326 (2005).
187. *Mesoscopic Fluctuations in Quantum Dots, Nanoparticles and Nuclei*
Y. Alhassid, Proceedings of the conference on Nuclei and Mesoscopic Physics, V. Zelevinsky, ed., American Institute of Physics Conference Proceedings **777**, pp. 250-269, New York (2005).
188. *Statistical Properties of Nuclei by the Shell Model Monte Carlo Method*
Y. Alhassid, Proceedings of the International Conference on Nuclear Data for Science and Technology, R.C. Haight, M.B. Chadwick, T. Kawano, and P. Talou, eds., American Institute of Physics Conference Proceedings **769**, p. 1283, New York (2005).
189. *Fano Interference and Cross-section Fluctuations in Molecular Photodissociation*
Y. Alhassid, Y. V. Fyodorov, T. Gorin, W. Ihra, and B. Mehlig, Phys. Rev. A **73**, 042711 (2006).

190. *Effective Quadrupole-Quadrupole Interaction from Density Functional Theory*
Y. Alhassid, G.F. Bertsch, L. Fang, B. Sabbey, Phys. Rev. C **74**, 034301 (2006).
191. *Spin-orbit Interaction in Quantum Dots in the Presence of Exchange Correlations*
H. Türeci and Y. Alhassid, Phys. Rev. B **74**, 165333 (2006).
192. *Large-scale Prediction of the Parity Distribution in the Nuclear Level Density and Application to Astrophysical Reaction Rates*
D. Moclj, T. Rauscher, G. Martinez-Pinedo, K. Langanke, L. Pacearescu, A. Faessler, F.-K. Thielemann, and Y. Alhassid, Phys. Rev. C **75**, 045805 (2007).
193. *Thermal Signatures of Pairing Correlations in Nuclei and Nanoparticles*
Y. Alhassid, Proceedings of the *Second International Conference on Collective Motion in Nuclei Under Extreme Conditions (COMEX2)*, Nucl. Phys. A **788**, 357c (2007).
194. *Spin Projection in the Shell Model Monte Carlo Method and the Spin Distribution of Nuclear Level Densities*
Y. Alhassid, S. Liu, and H. Nakada, Phys. Rev. Lett. **99**, 162504 (2007).
195. *Extracting the Ground-state Spin of a Quantum Dot from the Conductance Peaks in a Parallel Magnetic Field at Finite Temperature*
D. Huertas-Hernando and Y. Alhassid, Phys. Rev. B **75**, 153312 (2007).
196. *Scrambling of Hartree-Fock Levels as a universal Brownian-Motion Process*
Y. Alhassid, H. A. Weidenmueller, and A. Wobst, Phys. Rev. B **76**, 193110 (2007).
197. *Thermodynamics of Ultra-Small Metallic Grains in the Auxiliary-Field Monte Carlo Approach*, Y. Alhassid, L. Fang, and S. Schmidt, cond-mat/0702304.
198. *Effect of a Zeeman Field on the Superconductor-Ferromagnet Transition in Metallic Grains*
S. Schmidt, Y. Alhassid, and K. Van Houcke, Europhys. Lett. **80**, 47004 (2007).
199. *Interaction Matrix Element Fluctuations in Quantum Dots*
L. Kaplan and Y. Alhassid, in *Nuclei and Mesoscopic Physics*, AIP Conference Proceedings **995**, 192 -201 (2008).
200. *Interacting Quantum Dot Coupled to a Kondo Spin: a Universal Hamiltonian Study*
S. Rotter, H. E. Türeci, Y. Alhassid and A.D. Stone, Phys. Rev. Lett. **100**, 166601 (2008).

201. *The Shell Model Monte Carlo Approach to Level Densities: from Medium-Mass to Heavy Deformed Nuclei*
Y. Alhassid, in *Compound Nuclear Reactions and Related Topics*, AIP Conference Proceedings **1005**, 47 (2008).
202. *A New Effective Interaction for the Trapped Fermi Gas*
Y. Alhassid, G.F. Bertsch, L. Fang, Phys. Rev. Lett. **100**, 230401 (2008).
203. *Effective Shell Model Hamiltonians from Density Functional Theory: Quadrupolar and Pairing Correlations*
R. Rodriguez-Guzman, Y. Alhassid, G. F. Bertsch, Phys. Rev. C **77**, 064308 (2008).
204. *Interaction Matrix Element Fluctuations in Ballistic Quantum Dots: Random Wave Model*
L. Kaplan and Y. Alhassid, Phys. Rev. B **78**, 085305 (2008).
205. *Heavy Deformed Nuclei in the Shell Model Monte Carlo Method*
Y. Alhassid, L. Fang and H. Nakada, Phys. Rev. Lett. **101**, 082501 (2008).
206. *Mesoscopic Competition of Superconductivity and Ferromagnetism: Conductance Peak Statistics in Metallic Grains*
S. Schmidt and Y. Alhassid, Phys. Rev. Lett. **101**, 207003 (2008).
207. *Isospin-Projected Nuclear Level Densities in the Shell Model Monte Carlo Method*
H. Nakada and Y. Alhassid, Rapid Comm., Phys. Rev. C **78**, 051304 (2008).
208. *Microscopic calculation of symmetry projected nuclear level densities*
K. Van Houcke, S. M. A. Rombouts, K. Heyde, and Y. Alhassid, Phys. Rev. C **79**, 024302 (2009).
209. *The strong coupling limit of a Kondo spin coupled to a mesoscopic quantum dot: effective Hamiltonian in the presence of exchange interaction*
S. Rotter and Y. Alhassid, Phys. Rev. B **80**, 184404 (2009).
210. *Mesoscopic Interplay of Superconductivity and Ferromagnetism in Ultra-small Metallic Grains*
S. Schmidt and Y. Alhassid, arXiv: 0906.5210, Proceedings of the NATO Advanced Research Workshop *Recent Advances in Nonlinear Dynamics and Complex System Physics: from Natural to Social Sciences and Security*, pp. 25-35 (2009).
211. *Signatures of Exchange Interaction in the Thermopower of Quantum Dots*
G. Billings, A.D. Stone and Y. Alhassid, Phys. Rev. B **81**, 205303 (2010).

212. *From Femtoscience to Nanoscience: Nuclei, Quantum Dots, and Nanostructures*
Y. Alhassid, B.L. Altshuler and V.I. Fal'ko, Institute of Nuclear Theory (INT) news article, March 2010; see <http://www.int.washington.edu/alhassid.html>.
213. *A number-conserving theory of the pairing interaction: a global assessment*
A. Mukherjee, Y. Alhassid and G.F. Bertsch, Phys. Rev. C **83**, 014319 (2011).
214. *Dynamical effects and fluctuations of interaction matrix elements for a ballistic quantum dot*
L. Kaplan and Y. Alhassid, Phys. Rev. B **83**, 205312 (2011).
215. *Shell model Monte Carlo approach: the heavy nuclei*
Y. Alhassid, L. Fang and H. Nakada, Proceedings of the Tenth International Spring seminar on nuclear physics, Vietri sul Mare, Italy, Journal of Physics: Conference Proceedings **267**, 012033 (2011).
216. *Thermodynamic properties of metallic grains: the competition between pairing and spin exchange correlations*
K. Van Houcke, Y. Alhassid, S. Schmidt, and S. Rombouts, arXiv:1011.5421.
217. *A new effective interaction for the two-component trapped Fermi gas: the BEC to BCS crossover*
C.N. Gilbreth and Y. Alhassid, Phys. Rev. A **85**, 033621 (2012).
218. *Odd-particle systems in the shell model Monte Carlo: circumventing a sign problem*
A. Mukherjee and Y. Alhassid, Phys. Rev. Lett. **109**, 032503 (2012).
219. *Nuclear level density of ^{161}Dy in the shell model Monte Carlo method*
C. Özen, Y. Alhassid, and H. Nakada, Proceedings of the *Third International Workshop on Compound Nuclear Reactions*, Prague, Czech Republic, arXiv:1206.6335, EPJ Web of Conferences **21**, 05002 (2012).
220. *The coexistence of superconductivity and ferromagnetism in nano-scale metallic grains*
Y. Alhassid, K. Nesterov, and S. Schmidt, Proceedings of the Conference on the *Frontiers of Quantum and Mesoscopic Thermodynamics (FQMT'11)*, Prague, Czech Republic, Physica Scripta T **151**, 014047 (2012).
221. *Signatures of phase transitions in nuclei at finite excitation energies*
Y. Alhassid, C. Özen, and H. Nakada, Proceedings of *Beauty in Physics: Theory and Experiments*, arXiv:1210.3643, AIP Conference Proceedings **1488**, 386 (2012).

222. *Recent developments in the shell model Monte Carlo approach to nuclei*
Y. Alhassid, A. Mukherjee, H. Nakada and C. Özen, Proceedings of the conference on *Horizons of Innovative Theories, Experiments, and Supercomputing in Nuclear Physics*, arXiv:1210.3102, Journal of Physics: Conference Series **403**, 012012 (2012).
223. *Crossover from vibrational to rotational collectivity in heavy nuclei in the shell-model Monte Carlo approach*
C. Özen, Y. Alhassid and H. Nakada, Phys. Rev. Lett. **110**, 042502 (2013).
224. *Thermal Signatures of Pairing Correlations in Nuclei and Nano-Scale Metallic Grains*
Y. Alhassid, arXiv:1206.5834, chapter in *Fifty Years of Nuclear BCS: Pairing in Finite Systems*, eds. R. A. Broglia and V. Zelevinsky, World Scientific (2013).
225. *Thermodynamics of ultrasmall metallic grains in the presence of pairing and exchange correlations: mesoscopic fluctuations*
K. Nesterov and Y. Alhassid, Phys. Rev. B **87**, 014515 (2013).
226. *Level densities of nickel isotopes: Microscopic theory versus experiment*
M. Bonett-Matiz, A. Mukherjee, and Y. Alhassid, Phys. Rev. C Rapid Comm. **88**, 011302 (2013).
227. *Configuration-interaction Monte Carlo method and its application to the trapped unitary Fermi gas*
A. Mukherjee and Y. Alhassid, Phys. Rev. A **88**, 053622 (2013).
228. *Pair condensation in a finite trapped Fermi gas*
C.N. Gilbreth and Y. Alhassid, Phys. Rev. A **88**, 063643 (2013).
229. *Calculating level densities of heavy nuclei by the shell Model Monte Carlo method*
Y. Alhassid, C. Özen and H. Nakada, Proceedings of the International Conference on Nuclear Data for Science and Technology (ND2013), Nuclear Data Sheets **118**, 233 (2014).
230. *Recent Advances in the Microscopic Calculations of Level Densities by the Shell Model Monte Carlo Method*
Y. Alhassid, M. Bonett-Matiz, S. Liu, A. Mukherjee, H. Nakada, Proceedings of the Fourth International Workshop on Compound-Nuclear Reactions and Related Topics (CNR*13), arXiv:1401.0236, EPJ Web Conf. **69**, 00010 (2014).
231. *Collectivity in heavy nuclei in the shell model Monte Carlo approach*
C. Özen, Y. Alhassid, H. Nakada, Proceedings of the Fourth International Workshop

- on Compound-Nuclear Reactions and Related Topics (CNR*13), arXiv:1312.6787, EPJ Web Conf. **69**, 00011 (2014).
232. *Nuclear state densities of odd-mass heavy nuclei in the shell model Monte Carlo approach*
C. Özen, Y. Alhassid and H. Nakada, arXiv:1304.7405, submitted to Phys. Rev. C (2014).
233. *Mesoscopic superconductivity in ultra-small metallic grains*
Y. Alhassid and K. Nesterov, Proceedings of the Fourth Workshop on Nuclei and Mesoscopic Physics (NMP14), arXiv: 1407.8547, AIP Conf. Proc. **1619**, 24 (2014).
234. *Nuclear Deformation at Finite Temperature*
Y. Alhassid, C.N. Gilbreth, and G.F. Bertsch, Phys. Rev. Lett. **113**, 262503 (2014).
235. *Stabilizing the canonical-ensemble calculations in the auxiliary-field Monte Carlo method*
C.N. Gilbreth and Y. Alhassid, Computer Physics Communications **188**, 1 (2015).
236. *Collective enhancement of nuclear state densities by the shell model Monte Carlo approach*
C. Özen, Y. Alhassid, and H. Nakada, Proceedings of the NUBA Conference Series-1: Nuclear Physics and Astrophysics, arXiv:1501.05525 (2015).
237. *Nuclear state densities of odd-mass heavy nuclei in the shell model Monte Carlo approach*
C. Özen, Y. Alhassid and H. Nakada, Phys. Rev. C **91**, 034329 (2015).
238. *Recent Advances in the Application of the Shell Model Monte Carlo Approach to Nuclei*
Y. Alhassid, M. Bonett-Matiz, A. Mukherjee, H. Nakada and C. Özen, Proceedings of the Eleventh International Spring Seminar on Nuclear Physics, arXiv:1501.06113, Journal of Physics: Conference Series **580**, 012009 (2015).
239. *Direct microscopic calculations of nuclear level densities in the shell model Monte Carlo approach*
Y. Alhassid, M. Bonett-Matiz, S. Liu and H. Nakada, Phys. Rev. C **92**, 024307 (2015).
240. *The shell model Monte Carlo approach to level densities: recent developments and perspectives*
Y. Alhassid, contribution to the topical issue "Perspectives on Nuclear Data for the

- Next Decade,” edited by N. Alamanos, E. Bauge, and S. Hilaire, Euro. Phys. J. A **51**, 171 (2015), arXiv:1601.00107.
241. *Magnetic response of energy levels of superconducting nanoparticles with spin-orbit scattering*
K. Nesterov and Y. Alhassid, Phys. Rev. B **92**, 144508 (2015).
242. *Microscopic nuclear level densities by the shell model Monte Carlo method*
Y. Alhassid, G.F. Bertsch, C.N. Gilbreth, H. Nakada, and C. Özen, Proceedings of the Fourteen International Conference on Nuclear Reaction Mechanisms, edited by F. Cerutti, M. Chadwick, A. Ferrari, T. Kawano, and P. Schoofs, CERN-proceedings-2015-001 (CERN, Geneva, 2015), pp. 41-48, arXiv:1601.00118.
243. *Benchmarking mean-field approximations to level densities*
Y. Alhassid, G.F. Bertsch, C.N. Gilbreth, and H. Nakada, Phys. Rev. C **93**, 044320 (2016).
244. *Level densities of heavy nuclei in the shell model Monte Carlo approach*
Y. Alhassid, G.F. Bertsch, C.N. Gilbreth, H. Nakada and C. Özen, Proceedings of the Fifth International Workshop on Compound Nuclear Reactions and Related Topics (CNR*15), EPJ Web Conf. **122**, 02001 (2016).
245. *Auxiliary-field quantum Monte Carlo methods in nuclei*
Y. Alhassid, arXiv:1607.01870, in *Emergent Phenomena in Atomic Nuclei from Large-Scale Modeling: a Symmetry-Guided Perspective*, ed. K. D. Launey (World Scientific, Singapore, 2017), pp. 267–298.
246. *Spin-orbit scattering in superconducting nanoparticles*
Y. Alhassid and K.N. Nesterov, Proceedings of the conference on Frontiers of Quantum and Mesoscopic Thermodynamics (FQMT15), arXiv:1607.01002, Special Issue of Fortschritte der Physik – Progress of Physics **65**, 1600099 (2017).
247. *Particle-number projection in the finite-temperature mean-field approximation*
P. Fanto, Y. Alhassid and G.F. Bertsch, Phys. Rev. C **96**, 014305 (2017) .
248. *Nuclear deformation in the laboratory frame*
C.N. Gilbreth, Y. Alhassid and G.F. Bertsch, Phys. Rev. C **97**, 014315 (2018).
249. *Nuclear deformation by the shell model Monte Carlo method*
Y. Alhassid, G.F. Bertsch, C.N. Gilbreth and M.T. Mustonen, Proceedings of the Twelfth International Spring Seminar on Nuclear Physics, arXiv:1801.06175, Journal of Physics: Conference Series **966**, 012059 (2018).

250. *Neutron width statistics in a realistic resonance-reaction model*
P. Fanto, G. F. Bertsch and Y. Alhassid, Phys. Rev. C **98**, 014604 (2018).
251. *Statistical Theory of deformation distributions in nuclear spectra*
M. T. Mustonen, C. N. Gilbreth, Y. Alhassid, and G. F. Bertsch, Phys. Rev. C **98**, 034317 (2018) [Editor's Suggestion].
252. *The deformation dependence of level densities in the configuration-interaction shell model*
Y. Alhassid, G.F. Bertsch, C.N. Gilbreth and M.T. Mustonen, in Proceedings of the 15th International Conference on Nuclear Reaction Mechanisms, edited by F. Cerutti, A. Ferrari, T. Kawano, F. Salvat-Pujol, and P. Talou, CERN-Proceedings-2019-001 (CERN, Geneva, 2019), pp. 13-20.
253. *The Statistical Model of Nuclear Reactions: Open Problems*
P. Fanto, Y. Alhassid, and H. A. Weidenmüller, in Proceedings of the 15th International Conference on Nuclear Reaction Mechanisms, edited by F. Cerutti, A. Ferrari, T. Kawano, F. Salvat-Pujol, and P. Talou, CERN-Proceedings-2019-001 (CERN, Geneva, 2019), pp. 41-48.
254. *Neutron width statistics using a realistic description of the neutron channel*
P. Fanto, G. F. Bertsch, Y. Alhassid, in Proceedings of the 15th International Conference on Nuclear Reaction Mechanisms, edited by F. Cerutti, A. Ferrari, T. Kawano, F. Salvat-Pujol, and P. Talou, CERN-Proceedings-2019-001 (CERN, Geneva, 2019), pp. 69-75.
255. *The pseudogap regime in the unitary Fermi gas*
S. Jensen, C. N. Gilbreth, and Y. Alhassid, review in a special issue of the European Journal of Physics: Special Topics **227**, pp. 2241–2261, 2019, dedicated to the conference on Frontiers of Quantum and Mesoscopic Thermodynamics (FQMT'17).
256. *Transmission coefficients in compound-nucleus reaction theory*
Y. Alhassid, G.F. Bertsch, P. Fanto, and T. Kawano, Phys. Rev. C **99**, 024621 (2019).
257. *Thermal and quantum shape phase transitions in heavy nuclei*
Y. Alhassid., Proceedings of Symmetry and Order: Algebraic Methods in Many-Body Systems, AIP Conference Proceedings **2150**, 030002 (2019).
258. *Pairing correlations across the superfluid phase transition in the unitary Fermi gas*
S. Jensen, C. N. Gilbreth, and Y. Alhassid, Phys. Rev. Lett. **124**, 090604 (2020).

259. *Derivation of K-matrix reaction theory in a discrete basis formalism*
Y. Alhassid, G.F. Bertsch, and P. Fanto, Ann. Phys. **419**, 168233 (2020)
260. *Limits on assigning a shape to a nucleus*
A. Poves, F. Nowacki, and Y. Alhassid, Phys. Rev. C **101**, 054307 (2020).
261. *The contact in the unitary Fermi gas across the superfluid phase transition*
S. Jensen, C. N. Gilbreth, and Y. Alhassid, Phys. Rev. Lett. **125**, 043402 (2020).
262. *Statistical-model description of gamma decay from compound-nucleus resonances*
P. Fanto, Y. Alhassid and H.A. Weidenmüller, Phys. Rev. C **101**, 014607 (2020).
263. *Addendum to Derivation of K-matrix reaction theory in a discrete basis formalism*
Y. Alhassid, G.F. Bertsch, and P. Fanto, Ann. Phys. **424**, 168381 (2021).
264. *Finite-temperature mean-field approximations for shell-model Hamiltonians: the code HF-SHELL*
W. Ryssens and Y. Alhassid, Eur. Phys. J. A **57**, 1 (2021).
265. *Nuclear level densities: from empirical models to microscopic theories*
Y. Alhassid, in Compound-Nuclear Reactions, Proceedings of the Sixth International Workshop on Compound-Nuclear Reactions and Related Topics, Springer Proceedings in Physics **254**, pp. 97-112, Springer, 2021.
266. *Strong enhancement of level densities in the crossover from spherical to deformed neodymium isotopes*
M. Guttormsen, Y. Alhassid, W. Ryssens et. al., Phys. Lett. B **816**, 136206 (2021).
267. *State densities of heavy nuclei in the static-path plus random-phase approximation*
P. Fanto and Y. Alhassid, Phys. Rev. C **103**, 064310 (2021).
268. *Reducing the complexity of finite-temperature auxiliary-field quantum Monte Carlo*
C. N. Gilbreth, S. Jensen, and Y. Alhassid, Comp. Phys. Comm. **264**, 107952 (2021).
269. *Low-energy enhancement in the magnetic dipole γ -ray strength functions of heavy nuclei*
P. Fanto and Y. Alhassid, Phys. Rev. C Letters **109**, L031302 (2024).
270. *Pseudogap effects in the strongly interacting regime of the two-dimensional Fermi gas*
S. Ramachandran, S. Jensen, and Y. Alhassid, Phys. Rev. Lett. **133**, 143405 (2024).

271. *Magnetic dipole γ -ray strength functions of heavy nuclei in the configuration-interaction shell model*
Y. Alhassid, P. Fanto, and A. Mercenne, EPJ Web of Conferences **292**, 01001 (2024).
272. *Extracting spectra in the shell model Monte Carlo method using imaginary-time correlation matrices*
Y. Alhassid, M. Bonett-Matiz, C.N. Gilbreth, and S. Vartak, Phys. Rev. Lett. **133**, 182501 (2024).
273. *Pseudogap regime of the unitary Fermi gas with lattice auxiliary-field quantum Monte Carlo in the continuum limit*
S. Jensen, C. N. Gilbreth, and Y. Alhassid, arXiv:2408.16676.
274. *Magnetic dipole γ -ray strength functions in the crossover from spherical to deformed neodymium isotopes* [Editors' Suggestion]
A. Mercenne, P. Fanto, W. Ryssens, and Y. Alhassid, Phys. Rev. C **110**, 054313 (2024) [Editors' suggestion].
275. *Circumventing the odd-particle number sign Monte Carlo problem in shell model Monte Carlo*
Y. Alhassid, P. Fanto and C. Özen, Phys. Rev. C Letters **110**, L061303 (2024).
276. *Low-energy enhancement of the magnetic dipole radiation in odd-mass lanthanides*
D. DeMartini and Y. Alhassid, Phys. Rev. C **111**, 034315 (2025).
277. *Precision thermodynamic of the Fermi polaron at strong coupling*
S. Ramachandran, S. Jensen, and Y. Alhassid, arXiv:2410.00886.
278. *Direct local parametrization of nuclear state densities using the back-shifted Bethe formula*
C. Özen and Y. Alhassid, Nucl. Phys. A. **1058**, 123034 (2025).
279. *Finite-temperature (Q)RPA for shell-model Hamiltonians: the code HF-SHELL v2*
W. Ryssens and Y. Alhassid, in preparation.
280. *Nuclear state and level densities of actinides with the shell-model Monte Carlo*
D. DeMartini and Y. Alhassid, in preparation.
281. *Low-energy enhancement in the magnetic dipole radiation of actinides*
C. Rodgers, D. DeMartini, and Y. Alhassid, in preparation.