

TITLES OF PAPERS BY MIHAI GAVRILĂ

List I: Publications on Atomic Inner-Shell Radiative Transitions and Related (1953–2003)

A. Articles in Journals

1. M. Gavrila,
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2. M. Gavrila,
Derivation of Sauter's formula for the photoelectric effect by means of Born's approximation method, Studii și Cercetări de Fizică **8** (4), 421–432 (1957), (in Romanian).
3. M. Gavrila,
On Hall's formula for the relativistic photoeffect, Studii și Cercetări de Fizică **9** (3), 317–322 (1958), (in Romanian).
4. M. Gavrila,
On Hall's Formula for the Relativistic Photoeffect, Nuovo Cimento **9** (2), 327–330 (1958).
5. Mihai Gavrila,
Relativistic K-Shell Photoeffect, Physical Review **113** (2), 514–526 (1959).
6. M. Gavrila,
On the relativistic K-shell photoelectric effect, Studii și Cercetări de Fizică **11** (1), 49–54 (1960), (in Romanian).
7. M. Gavrila,
On the Relativistic K-Shell Photoeffect, Nuovo Cimento **15** (4), 691–694 (1960).
8. M. Gavrila,
The Relativistic Photoeffect in the L-Shell, Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (JETP) **38** (1), 309–311 (1960): Letter (in Russian);
The Relativistic Photoeffect in the L-Shell, Soviet Physics JETP **11** (1), 224–226 (1960): Letter.

9. M. Gavrila,
On the theory of the atomic photoelectric effect, Revista Învățămîntului Superior **3** (1), 45–49 (1961), (in Romanian).
10. Mihai Gavrila,
Relativistic L-Shell Photoeffect, Physical Review **124** (4), 1132–1141 (1961).
11. D. H. Constantinescu and M. Gavrila,
Coherent scattering of light by atomic hydrogen, Revue Roumaine de Physique **12** (2), 121–137 (1967).
12. Mihai Gavrila,
Analytic evaluation of the Kramers-Heisenberg matrix element for coherent scattering of photons by atomic hydrogen, Revue Roumaine de Physique **12** (8), 745–759 (1967).
13. Mihai Gavrila,
Elastic Scattering of Photons by a Hydrogen Atom, Physical Review **163** (1), 147–155 (1967).
14. M. Gavrila and A. Costescu,
Retardation in the Elastic Scattering of Photons by Atomic Hydrogen, Physics Letters **28 A** (9), 614–615 (1969).
15. M. Gavrila,
Compton Scattering of Photons by Bound K-Shell Electrons, Lettere al Nuovo Cimento Serie I, **2**, 180–184 (1969).
16. M. Gavrila and A. Costescu,
Retardation in the Elastic Scattering of Photons by Atomic Hydrogen, Physical Review A **2** (5), 1752–1758 (1970).
Erratum: Physical Review A **4** (4), 1688–1688 (1971).
17. Mihai Gavrila,
Compton Scattering by K-Shell Electrons. I. Nonrelativistic Theory with Retardation, Physical Review A **6** (4), 1348–1359 (1972).
18. Mihai Gavrila,
Compton Scattering by K-Shell Electrons. II. Nonrelativistic Dipole Approximation, Physical Review A **6** (4), 1360–1367 (1972).
19. A. Costescu and M. Gavrila,
Compton scattering by L-shell electrons, Revue Roumaine de Physique **18** (4), 493–521 (1973).
20. M. Gavrila,
Numerical results for nonrelativistic Compton scattering of photons by K-shell electrons in the dipole approximation, Revue Roumaine de Physique **19** (5), 473–487 (1974).
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21. M. Gavrila and M. N. Țugulea,
Compton scattering by L-shell electrons. II, Revue Roumaine de Physique **20** (3), 209–230 (1975).
22. V. Florescu and M. Gavrila,
Elastic scattering of photons by K-shell electrons at high energies, Physical Review A **14** (1), 211–235 (1976).
23. M. Gavrila and J. E. Hansen,
Calculation of $K_{\alpha\alpha}$ and $K_{\alpha h}$ transition rates, Physics Letters **58 A** (3), 158–160 (1976).
24. T. P. Hoogkamer, P. H. Woerlee, F. W. Saris, and M. Gavrila,
Two-electron, one-photon transitions following double K-shell ionization in symmetric collisions of N, O and Ne, Journal of Physics B: Atomic, Molecular and Optical Physics **9** (6), L145–L147 (1976).
25. M. Gavrila and James McEnnan,
Radiative corrections to photoeffect and the high-frequency end of the bremsstrahlung spectrum, Physics Letters **59 A** (6), 441–444 (1977).
26. James McEnnan and M. Gavrila,
Radiative corrections to the atomic photoeffect, Physical Review A **15** (4), 1537–1556 (1977).
27. James McEnnan and M. Gavrila,
Radiative corrections to the high-frequency end of the bremsstrahlung spectrum, Physical Review A **15** (4), 1557–1562 (1977).
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Calculation of transition probabilities for two-electron, one-photon and hypersatellite transitions for ions with two vacancies in the K shell, Journal of Physics B: Atomic, Molecular and Optical Physics **11** (8), 1353–1381 (1978).
29. Mihai Gavrila,
Rayleigh Scattering from $n=2$ States of Atomic Hydrogen, Zeitschrift für Physik A: Hadrons and Nuclei **293** (3), 269–279 (1979).
30. M. Gavrila and P. Mandal,
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31. David J. Botto and M. Gavrila,
Radiative corrections to atomic photoeffect and tip-bremsstrahlung. III, Physical Review A **26** (1), 237–249 (1982).

32. V. Véniard, M. Gavrila, and A. Maquet,
Two-photon bremsstrahlung, Physical Review A **35** (1), 448–451 (1987):
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33. V. Florescu and M. Gavrila,
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34. V. Florescu and M. Gavrila,
Extreme-relativistic cross sections for Compton scattering by K-shell electrons, Romanian Journal of Physics **48** (5–6), 639–648 (2003).
35. Viorica Florescu and Mihai Gavrila,
Extreme-relativistic Compton scattering by K-shell electrons, Physical Review A **68** (5), 052709: 1–17 (2003).

**B. Reports, Contributions to Edited Volumes,
Articles in the Bulletin of the American Physical Society, & Varia**

36. M. Gavrila,
Coherent scattering of light by atomic hydrogen. II., Joint Institute for
Laboratory Astrophysics (JILA) Report **86**, 25 pages, Boulder, Colorado,
September 1966.
37. Mihai Gavrila,
Education in physics at US universities, FORUM – Revista Învățămîntului
Superior **13** (4), 52–59 (1971), (in Romanian).
38. M. Gavrila, H. K. Tseng, and R. H. Pratt,
*Coherent and incoherent scattering of photons by bound electrons. Limitations
of present theoretical evaluations of the cross sections*, University of Pittsburgh
PITT-Report **2**, 44 pages, prepared for the National Bureau of Standards,
Washington, D. C., May 1973.
39. M. Gavrila,
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presented at the International Winter College, Trieste, 1973), (International
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40. M. Gavrila and V. Florescu,
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42. V. Florescu and M. Gavrilă,
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43. James McEnnan and M. Gavrilă,
Radiative Corrections to Atomic Photoeffect, Bulletin of the American Physical Society **20** (1), 91–91 (1975).
44. James McEnnan and M. Gavrilă,
Radiative Corrections to Bremsstrahlung in the High-Frequency Limit, Bulletin of the American Physical Society **21** (1), 50–50 (1976).
45. David J. Botto, R. H. Pratt, and M. Gavrilă,
Radiative Corrections to the Atomic Photoeffect, Bulletin of the American Physical Society **24** (1), 16–16 (1979).
46. M. Gavrilă,
Photon-atom elastic scattering in the volume X-ray and Atomic Inner-Shell Physics, (Proceedings of X 82), Editor: Bernd Crasemann, AIP Conference Proceedings **94**, (1982), pp. 357–388.
47. M. Gavrilă,
Rayleigh scattering S-matrix calculations: How accurate is the atomic description?, University of Pittsburgh PITT-Report **314**, 69 pages, prepared for the Lawrence Livermore National Laboratory, Livermore, California, February 1984.
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Corrections to S-matrix results for anomalous scattering, University of Pittsburgh PITT-Report **340**, 25 pages, prepared for the Lawrence Livermore National Laboratory, Livermore, California, 1986.

List II:

Publications on Laser-Atom Interactions (1976 -2008)

A. Articles in Journals

49. P. J. K. Langendam, M. Gavrilă, J. P. J. Kaandorp, and M. J. van der Wiel,
Resonant free-free absorption by electrons in the field of a neon atom, Journal of Physics B: Atomic, Molecular and Optical Physics **9** (15), L453-L457 (1976).
50. M. Gavrilă and M. J. van der Wiel,
Free-free radiative transitions of electron-atom systems, Comments on Atomic and Molecular Physics **8** (1-2), 1–20 (1978).

51. M. Gavrilă and J. Z. Kamiński,
Free-Free Transitions in Intense, High-Frequency Laser Fields, Physical Review Letters **52** (8), 613–616 (1984).
52. M. J. Offerhaus, J. Z. Kamiński, and M. Gavrilă,
Coulomb scattering in intense, high-frequency laser fields, Physics Letters **112 A** (3,4), 151–155 (1985).
53. M. Gavrilă, A. Maquet, and V. Véliard,
Two-photon free-free transitions in a Coulomb potential, Physical Review A **32** (4), 2537–2540 (1985): Rapid Communication.
Erratum: Physical Review A **33** (4), 2826–2826 (1986).
54. M. Gavrilă, M. J. Offerhaus, and J. Z. Kamiński,
Elastic scattering from a Yukawa potential in intense, high-frequency radiation fields, Physics Letters **118 A** (7), 331–335 (1986).
55. M. Pont and M. Gavrilă,
The levels of atomic hydrogen in intense, high-frequency laser fields, Physics Letters **123 A** (9), 469–474 (1987).
56. M. Pont, N. R. Walet, M. Gavrilă, and C. W. McCurdy,
Dichotomy of the Hydrogen Atom in Superintense, High-Frequency Laser Fields, Physical Review Letters **61** (8), 939–942 (1988).
57. M. Pont, M. J. Offerhaus, and M. Gavrilă,
Atomic hydrogen in circularly polarized, high-intensity and high-frequency laser fields, Zeitschrift für Physik D – Atoms, Molecules and Clusters **9** (4), 297–306 (1988).
58. J. van de Ree, J. Z. Kamiński, and M. Gavrilă,
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59. M. Pont, N. R. Walet, and M. Gavrilă,
Radiative distortion of the hydrogen atom in superintense, high-frequency fields of linear polarization, Physical Review A **41** (1), 477–494 (1990).
60. M. Pont and M. Gavrilă,
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61. M. Gavrilă, A. Maquet, and V. Véliard,
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62. R. J. Vos and M. Gavrilă,
Effective Stabilization of Rydberg States at Current Laser Performances,
Physical Review Letters **68** (2), 170–173 (1992).
63. H. G. Müller and M. Gavrilă,
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(1993).
64. J. Shertzer, A. Chandler, and M. Gavrilă,
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Physical Review Letters **73** (15), 2039–2042 (1994).
65. M. Marinescu and M. Gavrilă,
*First iteration within the high-frequency Floquet theory of laser-atom
interactions*, Physical Review A **53** (4), 2513–2521 (1996).
66. M. Gavrilă and J. Shertzer,
Two-electron atoms in superintense radiation fields: Dichotomy and stabilization,
Physical Review A **53** (5), 3431–3443 (1996).
67. Ernst van Duijn, M. Gavrilă, and H. G. Müller,
*Multiply Charged Negative Ions of Hydrogen Induced by Superintense Laser
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70. J. C. Wells, I. Simbotin, and M. Gavrilă,
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71. J. C. Wells, I. Simbotin, and M. Gavrilă,
Comment on "Physical Reality of Light-Induced Atomic States" Reply, Physical
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72. M. Dondera, H. G. Müller, and M. Gavrilă,
*Observability of the dynamic stabilization of ground-state hydrogen with
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73. M. Dondera, H. G. Müller, and M. Gavrilă,
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74. Mihai Gavrilă,
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75. M. Boca, H. G. Muller, and M. Gavrilă,
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76. I. Simbotin, M. Stroe, and M. Gavrilă,
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Low-frequency atomic stabilization and dichotomy in superintense laser fields from the high-intensity, high-frequency Floquet theory, Physical Review A **78** (3), 033404: 1–12 (2008).
78. M. Stroe, I. Simbotin, and M. Gavrilă,
Low-frequency atomic stabilization and dichotomy in superintense laser fields: Full Floquet results, Physical Review A **78** (3), 033405: 1–11 (2008).

B. Contributions to Edited Volumes and Books

79. M. Gavrilă,
Free-free photoabsorption of electron-atom systems, in the volume *Electronic and Atomic Collisions* (Proceedings of the X ICPEAC, 1977), Editor: G. Watel, (North-Holland, Amsterdam, 1978), pp. 165–184.
80. M. Gavrilă,
Multiphoton processes at high laser intensities, in the volume *Atomic Physics 9*, (Proceedings of ICAP 9, Seattle, Washington, 1984), Editors: Robert S. Van Dyck, Jr. and E. Norval Fortson, (World Scientific, Singapore, 1985), pp. 523–554.
81. M. Gavrilă,
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82. M. Gavrilă,
Atomic processes in high-intensity laser fields, in the volume *Atoms in Unusual Situations*, Editor: Jean Pierre Briand, NATO Advanced Study Institute Series B, Physics **143**, (Plenum Press, New York, 1986), pp. 225–239.
83. M. Gavrilă, J. Z. Kamiński, and M. J. Offerhaus,
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88. M. Gavrila,
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89. H. G. Muller and M. Gavrila,
Light-induced singly and doubly excited states of the negative hydrogen ion, in the volume *The Physics of Electronic and Atomic Collisions: XVIII ICPEAC*, Editors: Torkild Andersen, Bent Fastrup, Finn Folkmann, Helge Knudsen, and N. Andersen, AIP Conference Proceedings **295**, (1993), pp. 115–124.
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91. E. van Duijn, M. Gavrila, and H. G. Muller,
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92. M. Gavrilă,
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93. J. C. Wells, I. Simbotin, and M. Gavrilă,
Excess-photon ionization spectra and atomic structure in intense laser fields, in the volume *Multiphoton Processes: ICOMP VIII*, Editors: Louis F. DiMauro, Richard R. Freeman, and Kenneth C. Kulander, AIP Conference Proceedings **525**, (2000), pp. 89–100.
94. M. Gavrilă,
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