

Publication list of Michel Godefroid

(December 2020)

1. Editor, or co-Editor:

- “*Europhysics Conference Abstracts of the 35th Conference of the European Group for Atomic Spectroscopy*”, Université Libre de Bruxelles, Brussels (Belgium), July 15-18, 2003.
Editors: H.-P. Garnir (ULg), M. Godefroid (ULB) and P. Quinet (UMH,ULg),
Europhysics Conference Abstracts Series, **27B** (2003), 242 pages
ISBN: 2-914771-12-6, Published by the European Physical Society, Series Editor: R.M. Pick,
Paris, Managing Editor: P. Helfenstrein, Mulhouse.
- “*Proceedings of the 35th Conference of the European Group of Atomic Spectroscopy, Université Libre de Bruxelles, Brussels, Belgium, July 15-18, 2003*”
Editors: M. Godefroid and N. Vaeck
Physica Scripta **T112** (2004), 98 pages
ISBN: 91-89621-18-2

2. Articles/Chapters in books

- “*From field-free atoms to finite molecular chains in very strong magnetic fields.*”
M.R. Godefroid,
in “*Atoms and Molecules in Strong External Fields.*”, P. Schmelcher and W. Schweizer (Eds.),
Plenum Press, New York, (1998), 69-76.
- “*Atomic Density Functions: Atomic Physics Calculations Analyzed with Methods from Quantum Chemistry*”,
A. Borgoo, M. Godefroid and P. Geerlings,
in *Advances in the Theory of Quantum Systems in Chemistry and Physics*, Eds. Hoggan et al.,
Progress in Theoretical Chemistry and Physics, Chapter 9 / Vol. **22**, pp. 139-171 (2012).
- “*Atomic Structure: Variational Wave Functions and Properties*”,
C. Froese Fischer and M. Godefroid,
in *Handbook of Atomic, Molecular and Optical Physics*, G.W. Drake (Ed.), Springer Verlag
Chapter 21 (2020).

3. Articles in Intenational Journals

1. “*A priori calculation of atomic oscillator strengths using correlated transition states.*”
M. Godefroid, J.-J. Berger and G. Verhaegen,
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2. “*Multiconfigurational transition state calculations of atomic oscillator strengths. The resonance transition of beryllium.*”
M. Godefroid, J.-J. Berger and G. Verhaegen,
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3. *“An adaptation of ACRZ to calculate electric quadrupole oscillator strengths.”*
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“Erratum notice and adaptation of ACRZ0001 - Note on phase conventions.”
M. Godefroid,
Comput. Phys. Commun. **17** (1979), 427–430; **41** (1986), 195.
4. *“Hypervirial theorem, screening parameters and electric quadrupole oscillator strengths in the sodium sequence.”*
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Phys. Scripta **18** (1978), 323–331.
5. *“Outer correlation MCHF wavefunctions and oscillator strengths along the zinc isoelectronic sequence.”*
E. Biémont and M. Godefroid,
Phys. Scripta **22** (1980), 231–239.
6. *“A reassessment of the zinc solar abundance.”*
E. Biémont and M. Godefroid,
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7. *“MCHF calculations of electric dipole and quadrupole oscillator strengths along the helium isoelectronic sequence.”*
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J. Phys. B : Atom. Molec. Phys. **13** (1980), 3081–3098.
8. *“Many-body and relativistic effects in the Be sequence.”*
C. Froese Fischer, R. Glass and M. Godefroid,
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9. *“Lifetime trends for the $n = 3$ singlet states in the Mg sequence.”*
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10. *“Short-range interactions involving plunging configurations of the $n = 3$ singlet complex in the Mg sequence.”*
C. Froese Fischer and M. Godefroid,
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11. *“Note on the mutual spin-orbit matrix elements.”*
M. Godefroid,
J. Phys. B : Atom. Molec. Phys. **15** (1982), 3583–3586.
12. *“MCHF-BP fine structure splittings and transition rates for the ground configuration in the Nitrogen sequence.”*
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13. *“Relativistic and correlation effects on the lifetimes of $3s4p\ ^3P^o_j$ levels in Mg-like Sulphur and Chlorine.”*
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15. *“MCHF+BP results for some forbidden transitions.”*
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16. *“Inversion of the fractional parentage matrix.”*
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17. *“Brillouin’s theorem for complex atomic configurations.”*
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