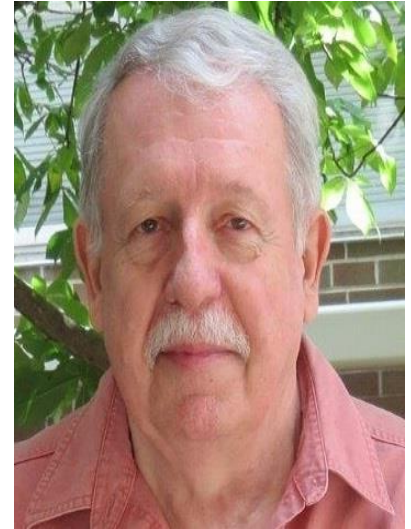


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EDUCATION

[Magister Fyzyki, Warsaw University, 1962-67, Physics](#)



[Ph. D., New York University, 1968-75, Physics](#)



POSITIONS and EMPLOYMENT

Post Doc, Radiation and Solid State Laboratory, New York University, 1976-79.

Visiting Assistant Professor, Texas A&M University, 1979-80.

Assistant Professor, Northwestern University of Louisiana, 1980-81.

[Associate Professor, East Carolina University, 1981-1987.](#)



[Professor, East Carolina University, 1988-](#)

HONORS

Fullbright Award, Centro Atómico, Bariloche, Argentina, 1991-92.

[Served on the International Advisory Committee for PIXE \(2013-2017\).](#)

[At PIXE 2017, elected to its International Honorary Committee.](#)

2015 Sigma Xi Research Award, ECU Chapter of Sigma Xi.

RESEARCH/CREATIVE ACTIVITY

Theoretical atomic physics. Inner-shell ionization and energy loss of charged particles in matter. Development and improvement of the ECPSSR theory of K-, L-, and M-shell ionization that is widely used for comparison with x-ray and Auger-electron production cross sections; in particular in PIXE analysis.

REFEREED PUBLICATIONS

Principal publications (from nearly 200 articles)

1. [W. Brandt and G. Lapicki, L-shell Coulomb ionization by heavy charged particles, Phys. Rev. A 20, 465-479 \(1979\).](#)
2. [G. Lapicki and W. Losonsky Coulomb deflection in ion-atom collisions, Phys.Rev.A 20 , 481-490 \(1979\).](#)
3. [G. Lapicki and F. D. McDaniel, Electron capture from K shells by fully stripped ions, Phys.Rev.A 22, 1896-1905 \(1980\).](#)
4. [W. Brandt and G.Lapicki, Energy-loss effect in in inner shell Coulomb ionization by heavy charged particles, Phys.Rev.A 23, 1717-1729 \(1981\).](#)
5. [G. Lapicki and W. Lichten, Reconciliation of atomoc- and molecular orbital models in slow and symmetric collisions, Phys.Rev.A 31, 1354-1361 \(1985\).](#)
6. [G. Lapicki, Cross sections for K-shell x-ray production by hydrogen and helium ions, J.Phys.Chem. Data 18, 111-218 \(1989\).](#)
7. [G. Lapicki, Testing of the ECPSSR theory and its modifications with ratios of antiproton-to-proton ionization cross sections, Nucl.Instr.Meth B 2141, 34-42 \(2005\).](#)
8. [G. Lapicki, Scaling of analytical cross sections for K-shell ionization by nonrelativistic protons to cross sections by protons at relativistic velocities, J.Phys.B 41 , 115201-115214 \(2008\).](#)
9. [J. Miranda and G. Lapicki, Experimental cross sections for L-shell x-ray production and ionization by protons, At. Data.Nucl.Data Tables 100, 651-780 \(2014\)](#)

The most recent publications since 2009:

1. M. Czarnota, D. Banaś, J. Braziewicz, J. Semaniak, M. Pajek, M. Jaskóła, A. Korman, D. Trautmann, W. Kretschmer, G. Lapicki, and T. Mukoyama, "X-ray study of M-shell ionization of heavy atoms by 8.0-35.2 Mev Oq+ ions: The role of multiple ionization effects", Phys.Rev. A 79, 032710-032724 (2009).
2. L.C. Phinney, J.L. Duggan, G. Lapicki, F.U. Nabb, K. Hossain, and F.D. McDaniel, "Thorium and uranium M-shell x-ray production by 0.4-4.0 Mev protons and 0.4-6.0 Mev helium ions", J.Phys. B 42, 085202-085210 (2009).
3. G. Lapicki, "Evaluation of cross sections for L α x-ray production by up to 4 MeV protons in representative elements from silver to uranium", J. Phys. B 42 , 145204-145214. (2009).
4. D. Mitra, M. Sarkar, D. Bhattacharya, S. Santra, A. C. Mandal, G. Lapicki, "Lower and upper bounds on M-shell X-ray production cross sections by heavy ions", Nucl. Instr. Meth. B 268 450-459 (2010).
5. G. Lapicki and J. Miranda, "Updated database for L x-ray production by protons and extraction of L-subshell ionization cross sections from only L γ and L α + L β cross sections" , X-Ray Spectrometry 40, 122-126 (2011).
6. L.C. Phinney, G. Lapicki, D.L. Weathers, F.U. Naab, J.L. Duggan, and F.D. McDaniel "Thorium and uranium M-shell x-ray production cross sections by 4.5-11.3 MeV carbon ion and 4.5-13.5 MeV oxygen ion bombardment", J.Phys. B 45, 035205-035213 (2012).
7. J. Miranda and G. Lapicki, "Experimental cross sections for L-shell x-ray production and ionization by proto
8. G. Lapicki, "Werner Brandt legacy to PIXE: Past and present " , Nucl. Instr. Meth. B 318. 6-10 (2014).

9. D. D. Cohen, E. Stelcer, J. Crawford, A. Atanacio, C. Doherty, and G. Lapicki, "Comparison of proton and helium induced M subshell x-ray production cross sections with the ECUSAR theory", Nucl. Instr. Meth. B 318, 11-14 (2014).
10. Ž. Smit and G. Lapicki, "Energy loss in the ECPSSR theory and its calculation with exact integration limits", J. Phys. B 47, 055203-055210 (2014).
11. G. Lapicki, "Analytical formulas for differential cross sections for ejection of electrons in ionization of water by protons in the PWBA and ECPSSR", J. Phys.Conf.Series 635, 022015 (2015).
12. S. Kumar, U. Singh, M. Oswal, G. Singh, N. Singh, D. Mitra, T. Nandi, G. Lapicki, "L shell x-ray production in high-Z elements using 4-6 MeV/u fluorine ions", Nucl. Instr. Meth. B 395 39-51 (2017).
13. J. Miranda and G. Lapicki, "Experimental cross sections for L-shell x-ray production and ionization by protons", At.DataNucl.DataTables, 100, 651-780 (2017).
14. J. Miranda and G. Lapicki, "Errata and update to Experimental cross sections for L-shell x-ray production and ionization by protons", At.DataNucl.DataTables, 119, 443-453 (2018).
15. G. Lapicki and J. Miranda, "Universal empirical fit to L-shell X-ray production cross sections by protons", Nucl. Instr. Meth. B 414, 184-189 (2018).

INVITED PRESENTATIONS (the most recent since 2010)

An invited first talk at the opening session of the 12th International Conference on Particle Induced X-Ray Emission and Its Analytical Applications, 27 June -2 July, 2010, Guildford, UK.

An invited first talk at the 21st International Conference on the Application of Accelerators in Research and Industry, 8-13 August, 2010, Fort Worth, USA.

Poster at the 14th International Congress of Radiation Research (incorporating the 57th Annual Meeting of the Radiation Research Society), 28 August -1 September, 2011, Warsaw, Poland.

[An invited first talk at the opening session of the 13th International Conference on Particle Induced X-Ray Emission, 3-8 March 2013, Gramado, Brazil.](#)

An invited talk at the [24th International Symposium on Ion-Atom Collisions, 19-21 July 2015, Barcelona, Spain.](#)

An invited talk at the 24th Conference on Applications of Accelerators in Research and Industry, Oct 30-Nov 4, 2016, Fort Worth, USA.

An invited talk at the 13th International Topical Meeting on Nuclear Applications of Accelerators, July 31-Aug 4, 2017, Québec City, Canada.

Professional memberships: [American Physics Society](#), [Sigma Xi](#), [Fullbright Association](#)
[Canadian Nuclear Society](#)

Topic Editor: Atomic and Molecular Physics at the 24th CAARI, 2016, Fort Worth, USA.

Editorial Board [Advanced Studies in Theoretical Physics](#) [Associate Editor for Journal of Atomic and Molecular Physics](#) [Also, Atomic and Molecular Physics editor for Open Physics](#)

Organizing committee for [Atomic and Nuclear Physics in 2018 \(Boston\) and 2017 \(Las Vegas\)](#)

[Number of citations > 3250 on Google Scholar](#)