

Curriculum Vitae

Professor Dr. M. Alfaz Uddin

PRESENT ADDRESS:

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PERMANENT ADDRESS:

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Bate of Birth: March 12, 1950
Nationality: Bangladeshi
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EDUCATIONAL QUALIFICATION:

- **Ph.D.:** 2004 Department of Physics, Rajshahi University, Bangladesh
Thesis: “*Theoretical determination of electron impact single ionization cross-sections for neutral atoms and ions.*”
- **M.Sc.:** First Class, 1974 (held in 1976),
Department of Physics, Rajshahi University, Bangladesh
- **B.Sc. (Honours):** First Class, 1973 (held in 1975),
Department of Physics, Rajshahi University, Bangladesh.
- **H.S.C.:** First Division securing third position (1968),
Rajshahi Govt. College, Rajshahi Board
- **S.S.C.:** First Division securing fifth position (1966),
Nawabganj H. M. Institution, Rajshahi Board
- **Scholarship Examinations:** Secured second and first positions respectively in Junior and Primary Scholarship Exams.

JOB EXPERIENCES:

- UGC Professor, August 2017 –to date.
- Dean, School of Science and Engineering and Head of Medical Physics, Khwaja Yunus Ali University, Sirajganj, Bangladesh.

- July 2016 to January 2017.

- Professor (part-time), Medical Physics, Khwaja Yunus Ali University, Sirajganj, Bangladesh.
- March 2016 – June 2016
- Post-retirement leave from Rajshahi University, Rajshahi, Bangladesh.
- July 2016 – June 2016
- Professor of Physics, Rajshahi University, Rajshahi, Bangladesh.
- November 2002 – June 2015
- Associate Professor of Physics, Rajshahi University, Bangladesh.
- August 92 – October 2002
- Assistant Professor of Physics, Rajshahi University, Rajshahi, Bangladesh.
- August 83 – August 92
- Lecturer in Physics, Rajshahi University, Rajshahi, Bangladesh.
- July 80 – July 83
- Scientific Officer, Bangladesh Atomic Energy Commission (BAEC), Dhaka, Bangladesh.
- April 78 – June 80

ACTED AS REVIEWER OF JOURNALS:

- 1) European Physical Journal D
- 2) Nuclear Science and Applications
- 3) Journal of Scientific Research
- 4) Journal of Physics (AMO) B

RESEARCH AWARD:

1. Bangladesh Academy of Science Gold Medal Award-2017 in Physical Sciences (Senior Group).
2. Razzaq-Shamsun Lifetime achievement in Physics, 2016
3. S.N. Nahar Physics lifetime research award, 2014, University of Rajshahi.

PROFESSIONAL MEMBERSHIP:

- 1) 2008 – 2013, Group Associate, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy.
- 2) Life Member, Bangladesh Physical Society, Bangladesh.

COUNTRY VISITED: Italy

PhD DISSERTATION SUPERVISED:

A.K. F. Haque, *Electron impact ionization of neutral and charged atoms.*

MASTER'S DISSERTATIONS SUPERVISED:

1. Faria Sabrina, *Investigation of semi-empirical models of electron impact single impact ionization cross-section of atoms and molecules*, 2011.
2. Md. Shahidul Islam, *Empirical models for the electron impact ionization cross-section calculation*, 2009
3. Mahamudul Hasan, *Elastic scattering of electron and positron by atoms*, 2009.
4. Ismail Hossain, *Models for determination of electron impact ionization cross-sections of neutral atoms and ions*, 2008.
5. M. M. Rashid, *Ambiguities in the alpha-alpha optical potential*, 2004.
6. Samiul Islam, *Folding potential for the alpha elastic scattering on alpha-cluster nuclei*, 2002.
7. M S. Hossain, *Potential description of alpha scattering by folding alpha-alpha potential*, 2000.
8. A S B Tariq, *Potential description of the alpha-^{28,30}Si interaction in the ALAS region*, 1998.
9. M. R. Goulder, *A theoretical study of elastic scattering of neutron & electron from some nuclei*, 1998.
10. H. R. Sultana, *Optical model analysis of the elastic scattering of protons from the nuclei ⁵⁶Fe, ^{58,60,62,64}Ni, and ²⁰⁸Pb*, 1995.
11. A. Kumar Saha, *A folding model approach to the study of elastic scattering of neutron by ¹⁶O*, 1993.

RESEARCH ARTICLES IN JOURNALS:

2019

1. Elastic scattering of electrons from the ions of argon isonuclear series. Mahmudul H Khandker, A. K. F. Haque, M. Maaza, **M. Alfaz Uddin**, Phys. Scr. 94 075402 (2019).
2. Scattering of e[±] from N₂ in the energy range 1 eV - 10 keV, Mahmudul H Khandker, Nazifa T Arony, A K F Haque, M Maaza, M Masum Billah and **M Alfaz Uddin**, Molecular Physics, <https://doi.org/10.1080/00268976.2019.1699183> [2019]
3. Proton-induced secondary electron emission from elemental solids over the energy domain 1 keV-1000 MeV, **A. K. Fazlul Haque**, M. M. Haque, Sanjida Sultana, M. Atiqur R. Patoary, M. Sohag Hossain, M. Maaza, **M. Alfaz Uddin**, Results in Physics **15**, 102519 (2019).
4. Scattering of e[±] from ytterbium atoms, M. Shorifuddoza, M. Atiqur R. Patoary, D. H. Jakubassa-Amundsen, A. K. F. Haque, **M. Alfaz Uddin**, Eur. Phys. J. D **73**, 164 (2019).

5. e^{\pm} - Ar scattering in the energy range $1 \text{ eV} \leq E_i \leq 0.5 \text{ GeV}$, M. M. Haque, **A. K. F. Haque**, D. H. Jakubassa-Amundsen, M. Atiqur R. Patoary, A. K. Basak, M. Maaza, B. C. Saha, **M. Alfaz Uddin**, J. Phys. Commun. **3**, 045011 (2019).
6. Relativistic treatment of scattering of electrons and positrons by mercury atoms, M. M. Haque, A. K. F. Haque, Prajna P. Bhattacharjee, **M. Alfaz Uddin**, M. Atiqur R. Patoary, A. K. Basak, M. Maaza and B. C. Saha, Molecular Physics **117**, 2303-2319 (2019).
7. Reduction of cadmium toxicity in wheat through plasma technology. AH Kabir, n MMRahma, U Das, U Sarkar, NC Roy, a MAREz, r MRTalukde, **M. Alfaz Uddin**,. PLoS ONE 14(4), e0214509 (2019)

2018

8. A study of the critical minima and spin polarization in the elastic electron scattering by the lead atom, AKF Haque, MMHaque, MSohag Hossain, MIsmaail Hossain, MATiqur R Patoary, MMAaza, AKBasak, BCSaha and **M Alfaz Uddin**, J. Phys. Commun. **2**, 125013 (2018).
9. Relativistic treatment of scattering of electrons and positrons by mercury atoms, M. M. Haque, A. K. F. Haque, Prajna P. Bhattacharjee, **M. Alfaz Uddin**, M. Atiqur R. Patoary, A. K. Basak, M. Maaza & B. C. Saha, Molecular Physics, <https://doi.org/10.1080/00268976.2018.1548712> (2018).
10. Comparative study of eV to GeV electrons and positrons scattering elastically from neutral atoms, A K Fazlul Haque, **M Alfaz Uddin**, D H Jakubassa-Amundsen and Bidhan C Saha, J. Phys. B: At. Mol. Opt. Phys. **51**, 175202 (2018).
11. Electron impact L-subshell and total L-shell ionization cross-sections of atoms ($Z=18-92$), M. Atiqur R. Patoary, A.K. Fazlul Haque, **M. Alfaz Uddin**, Sanjida Sultana, M. Shorifuddoza, M. Monirul Haque and M. Maaza, Phys. Scr. **93**, 115401 (2018).
12. Elastic scattering of e^{\mp} by Na atoms. M. Elias Hosain, M. Atiqur R. Patoary, M. M. Haque, A. K. Fazlul Haque, M. Ismail Hossain, **M. Alfaz Uddin**, Arun K. Basak, M. Maaza & Bidhan C. Saha, Molecular Physics, **116**, 631-648 (2018).
13. Electron-Impact Ionization Cross Sections for Inner L- and M-Subshells of Atomic Targets at Relativistic Energies. Abul K.F. Haque, Malik Maaza, Md. M. Haque, Md. A.R. Patoary, **M. A. Uddin**, Md. I. Hossain, Md. S. Mahbub, Arun K. Basak, Bidhan C. Saha, Advances in Quantum Chemistry, Vol. **77**, Chapter 3, 121-166 (2018).

2017

14. **Relativistic calculations for spin-polarization of elastic electron-mercury scattering.** A K F Haque, M M Haque, Prajna P Bhattacharjee, **M Alfaz Uddin**, M Atiqur R Patoary, M Ismail Hossain, A K Basak, M Selim Mahbub, M Maaza, and B C Saha. J. Phys. Commun. **1** 035014 (2017).
15. Electron impact ionization of individual sub-shells and total of L and M shells of atomic targets with $Z = 38 - 92$. **A. K. F. Haque**, M. Maaza, **M. A. Uddin**, M. Atiqur

- R. Patoary, M. Ismail Hossain, A. K. Basak, B. C. Saha and M. Selim Mahbub. - J. Phys. B: At. Mol. Opt. Phys. **50**, 055005 (2017).
16. An Analytical Model for The Electron Impact K-Shell Ionization Cross Sections of Atoms. M. Atiqur R. Patoary, A.K.F. Haque, M. Ismail Hossain, M. A. Uddin, and A.K. Basak. Int. J. Mass. Spectrometry **415**, 1–8 (2017).
 17. Electron impact secondary electron emissions from elemental and compound solids. A. K. Fazlul Haque, M. M. Haque, M. Atiqur R. Patoary, **M. Alfaz Uddin**, M. Ismail Hossain, M. Selim Mahbub, Arun K. Basak, M. Maaza, Bidhan C. Saha. - Vacuum 141 (2017) 192-209
 18. Electron impact secondary electron emissions from atomic and molecular solid targets. A. K. F. Haque, **M. A. Uddin**, A. K. Basak, B. C. Saha, M. Maaza, M. A. R. Patoary, M. M. Haque, and M. Ismail Hossain. J. Phys.: Conf. Se **8754**, 072001 (2017).
 19. Electron impact L and M-subshell ionization cross sections for atoms ($14 \leq Z \leq 92$) including the relativistic effects. B. C. Saha, A. K. Basak, **M. A. Uddin**, A. K. F. Haque, M. A. R. Patoary, M. M. Haque, M. Ismail Hossain, and M. Maaza. J. Phys.: Conf. Ser. **875**, 052001 (2017).
 20. Elastic scattering of electron and positron by cadmium atom. A.K.F. Haque, M. Ismail Hossain, M. Alfaz Uddin, M. Atiqur R. Patoary, A. K. Basak, M. Maaza and B. C. Saha, Molecular Physics, **115**, 566-578(2017).

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21. Electron impact stopping powers for elemental and compound media. A.K. Fazlul Haque, M. Atiqur R. Patoary, **M. Alfaz Uddin**, Arun K. Basak, M. Ismail Hossain, Mahmudul Hasan, Bidhan C. Saha, M. Maaza, Vacuum, **132**, 123 (2016).
22. Elastic scattering of electrons and positrons by atomic magnesium. M. Ismail Hossain, A. K. F. Haque, M. A. R. Patoary, **M. A. Uddin**, and A. K. Basak. Eur. Phys. J. D, **70**, 41 (2016).
23. Electron Impact Atomic and Ionic Ionization: Analytical, Semi-empirical, and Semi-classical Methods. A.K. Fazlul Haque, M. Atiqur R. Patoary, M. Alfaz Uddin, Arun K. Basak, Bidhan C. Saha, Advances in Quantum Chemistry, Vol. 73, 363-414 (2016).

2015

24. Dependence of the $^{16}\text{O}+^{16}\text{O}$ nuclear potential on nuclear incompressibility, S. Hossain, A. S. B. Tariq, Athoy Nilima, M. Sujjan Islam, R. Majumder, M. A. Sayed, M. M. Billah, M. M. B. Azad, M. A. Uddin, I. Reichstein, F. B. Malik, and A. K. Basak, - Phys. Rev. C, 91, 064613, (2015).
25. Ion impact stopping cross sections for various media ($Z = 3-100$). A.K.F. Haque, M. Atiqur R. Patoary, **M.A. Uddin**, A.K. Basak & B.C. Sah. Molecular Physics, **114**, 356-364 (2015).
26. Theoretical electron impact ionization cross sections for atomic and ionic targets for $E \leq 10$ keV; B. C. Saha, A. K. F. Haque, M. Atiqur R. Patoary, **M. A. Uddin** and A. K. Basak, Journal of Physics: Conference Series **635**, 082004 (2015).
27. Electron impact M-subshell ionization of atoms at relativistic energies. A. K. F. Haque, **M. Alfaz Uddin**, M. A. R. Patoary, A. K. Basak and B. C. Saha; Journal of Physics: Conference Series **635**, 052080 (2015).

2014

28. Elastic scattering of electrons by calcium atoms. *Mahmudul Hasan, M. Alfaz Uddin, M. Ismail Hossain, A.K.F. Haque, and A.K. Basak*, Can. J. Phys. Vol-92, 206-215 (2014).

2013

29. Electron impact ionization cross-section of K-shell and H- to Be-isoelectronic series: An empirical model. A.K.F. Haque, M. Ismail Hossain, T.I. Talukder, Mahmudul Hasan, **M. Alfaz Uddin**, A.K. Basak, B.C. Saha, F.B. Malik, Radiation Physics and Chemistry **91**, 50 (2013).
30. Non-monotonic potential description of alpha-Zr refractive elastic scattering. S Hossain, Masum Billah, M M B Azad, Farzana Parvin, M N A Abdullah, K M Hasan, **M A Uddin**, A S B Tariq, A K Basak, I Reichstein⁴ and F B Malik, J. Phys. G: **40**, 105109 (2013). [highlighted in <http://iopscience.iop.org>]
31. Semi-empirical model for stopping cross sections of p , α and Li ions; **M. Alfaz Uddin**, A. K. Fazlul Haque, Tanvir I. Talukder, Arun K. Basak, Bidhan C. Saha, Fary B. Malik, Eur. Phys. J. D. **67**, 214 (2013).
- 2012**
32. Electron impact double ionization of heavy elements. *M. R. Talukdar, M. Shahjahan, M. A. Uddin*. Phys. Scr. **85**, 015301 (2012)
33. Applicability of Vaisburd and Evdokimov Model to Ionic Targets. *F. Sabrin, M. A. Uddin, A. K. F. Haque*, Journal of Scientific Research, **4**, 307 (2012).
- 2011**
34. Non-monotonic potentials and vector analyzing powers of ${}^{6,7}\text{Li}$ scattering by ${}^{12}\text{C}$, ${}^{26}\text{Mg}$, ${}^{58}\text{Ni}$, and ${}^{120}\text{Sn}$. *A.K. Basak, M. M. Billah, M. J. Kobra, M. K. Sarkar, M. M. Rahman, P.K. Das, S. Hossain, M.N.A. Abdullah, A.S.B. Tariq, M. A. Uddin, S. Bhattacharjee, I. Reichstein and F. B. Malik*, Eur. Phys. Lett. **94**, 62002 (2011).
35. Electron impact ionization in K-, L- and M-shell of atomic targets, *M. A. R. Patoary, M. Alfaz Uddin, A. K. F. Haque, M. Shahjahan, A. K. Basak, and B. C. Saha*, Int. J. Quantum International J. Quan. Chemistry, **111**, 923 (2011).
- 2010**
36. Generalized Kolbenstvedt model for electron impact ionization of K-, L- and M-shell ions, *A. K. F. Haque, M. Shahjahan, M. A. Uddin, M. A. R. Patoary, A. K. Basak, B. C. Saha, and F. B. Malik*, Phys. Scr. **81**, 045301(2010).
37. An extended empirical model for inner-shell ionization of atoms. *K. F. Haque, M. Shahjahan, M.R. Talukder, M. Shahjahan, M, A. Uddin, A. K. Basak, and B. C. Saha*, J. Phys. B: At. Mol. Opt. Phys. **43**, 115201 (2010).
38. Dynamic polarization potential effects on vector analyzing powers of 6Li - 28Si elastic scattering from non-monotonic potentials. *A.K. Basak, P.K. Roy, S. Hossain, M.N.A. Abdullah, A.S.B. Tariq, M.A. Uddin, I. Reichstein, and F.B. Malik*, Physics Letters B **692**, 47 (2010).
- 2009**
39. Electron impact double ionization cross sections of light elements. *M.R. Talukder, A.K.F. Haque, and M. A. Uddin*, Eur. Phys. J. D **53**,133 (2009).
40. An empirical formula for inner-shell ionization of atoms. *A. K. F. Haque, M. R. Talukder, M. Shahjahan, M. A. Uddin, A. K. Basak*,- ICTP IC/2009/050.
41. Electron impact L- and M-shell ionization of atoms at relativistic energies. *AKF Haque, M. Alfaz Uddin, M. Shahjahan, M. R. Talukder, M. N. A. Abdullah and A. K. Basak*, ICTP IC/2009/036

42. Empirical model for the electron impact K-shell ionization of atoms. *M. A. Patoary, M. Alfaz Uddin, A. K. F. Haque, M. Shahjahan, , A. K. Basak and M. R. Talukder, B.C. Saha*, Int. J. Quantum Chem. **109**, 897 (2009).
43. Modified version of revised Deutsch-Mark model for electron impact K-shell ionization cross sections of atoms at relativistic energies. *A. K. F. Haqu , M.S.I. Sarker, M. A. Patoary, M. Shahjahan, M. Ismail Hossain, M. Alfaz Uddin, A. K. Basak and B.C. Saha*, Int. J. Quantum Chem. **109**, 1442 (2009).
44. Potential description of ${}^6\text{Li}$ -elastic scattering by ${}^{20}\text{Si}$, S. Hossain. *S. Hossain, M.N.A. Abdullah, A.K. Basak, S.K. Das, M.A. Uddin, A.S.B. Tariq, I. Reichstein, and F.B. Malik*, European Physical Journal A **41**, 215 (2009).

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45. Empirical model for electron impact ionization cross-sections of neutral atoms. *M. R. Talukder, S. Bose, M.A.R. Patoary, A. K. F. Haque, M. A. Uddin, A. K. Basak and M. Kando*, Eur. Phys. J. D **46**, 281 (2008).
46. Electron impact K-shell ionization cross-sections of atoms at relativistic energies. *M. A. Patoary, M. Alfaz Uddin, A. K. F. Haque, A. K. Basak, M. R. Talukder, K. R. Karim and B. C. Saha*, Int. J. Quantum Chem. **108**, 1023 (2008).
47. Non-monotonic alpha- and ${}^6\text{Li}$ -potentials from energy density functional formalism. *S. Hossain, A. K. Basak, M. A. Uddin, M. N. A. Abdullah, I. Reichstein, F. B. Malik*, - Int. J. Modern Phys. B **22**, 4697 (2008).
48. Binary encounter model for the electron impact K-shell ionization of atoms. *M. A. Patoary, M. Alfaz Uddin, A. K. F. Haque, M. Shahjahan, , A. K. Basak and C. Saha*, Int. J. Quantum Chem. **108**, 1326 (2008).
49. Microscopic ${}^6\text{Li}$ - ${}^{28}\text{Si}$ potential from the energy-density functional theory. *S. Hossain, M. N. A. Abdullah, A. S. B. Tariq, M. A. Uddin, A. K. Basak, K. M. Rusek, I. Reichstein and F. B. Malik*, EPL, **84**, 52001 (2008).

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50. Alpha-alpha and Alpha-nucleus potentials. *Z. F. Shehadeh, A.K. Basak, M. N. A. Abdullah, M. A. Uddin, I. Reichstein, M. S. Sabra, and F.B. Malik*, Int. J. Modern Phys. B **21**, 3429 (2007).
51. Generalized Kolbenstvedt model for electron impact ionization of K-, L- and M-shell atoms. *A.K.F. Haque, M.A. Uddin, M.A.R. Patoary, A.K. Basak, M.R. Talukder, B.C. Saha, K.R. Karim, and F.B. Malik*, Eur. Phys. J. D **42**, 203 (2007).

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52. Empirical model for the electron-impact K-shell-ionization cross sections. *A.K.F. Haque, M. A. Uddin, A.K.Basak, K.R. Karim and B.C. Saha*, Phys. Rev. A **73**, 012708 (2006).
53. Modified Kolbensvedt model for the electron impact K-shell ionization cross sections of atoms. *M.A. Uddin, A.K.F. Haque, A.K. Basak, K.R. Karim, and F.B. Malik*. Euro. Phys. J. D **37**, 361 (2006).
54. Relativistic effects in electron impact ionization from the p-orbital. *A.K.F. Haque, M.A. Uddin, A.K. Basak, K.R. Karim, B.C. Saha, F.B. Malik*. Phys. Let. A **354**, 449 (2006).
55. Electron impact single ionization of mono- and di-positive ions, *M. A. Uddin, A. K. F. Haque, M. S. Mahbub, K. R. Karim*, Pramana-J. Phys. **66**, 11119 (2006).
56. Study of electron impact single ionization of ions with charge $q > 2$. *M. A. Uddin, M. G. Mortuza, A. K. Basak*, Journal of Bangladesh Academy of Sciences **30**, 101(2006).

57. Electron-impact ionization of L-shell atomic species. *A.K.F. Haque, M.A. Uddin, A.K. Basak, K.R. Karim, B.C. Saha, F.B. Malik*, Phys. Rev. A **73**, 052703 (2006).
58. Shallow folding potential for $^{16}\text{O} + ^{12}\text{C}$ elastic scattering. *S. Hossain, M.N.A. Abdullah, K. M. Hasan, M. Asaduzzaman, M.A. R. Akanda, S.K. Das, A.S. B. Tariq, M. A. Uddin, A.K. Basak, S. Ali, F. B. Malik*, Physics Letters B **636**, 248 (2006).
59. Electron-impact ionization of M-shell atoms. *A. K. F. Haque, M. A. Uddin, A.K. Basak, K.R. Karim, B.C. Saha, F.B. Malik*. Physica Scripta **74**, 377 (2006).
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2005

61. Band mixing in ^{29}Si and ^{29}P . *S. Hossain, M.N.A. Abdullah, S.K. Das, M.A. Uddin, A.K. Basak, H.M. Sengupta, I.J. Thompson and F.B. Malik*, J. Phys. G: Nucl. Part. Phys. **31**, 309 (2005).
62. Infrared study of the effect of $\text{P}^{2+}\text{O}^{5-}$ in the structure of lead glasses. *M. Rafiqul Ahsan, M. Alfaz Uddin and M. Golam Mortuza*, Indian J. Pure and Appl. Phys. **43**, 89 (2005).
63. Computation of electron impact K-shell ionization cross-sections of atoms. *M. A. Uddin, A.K.F. Haque, M. Masum Billah, A.K. Karim, and B.C. Saha*, Phys. Rev. A **71**, 032715 (2005).
64. Electron impact ionization of Beryllium isoelectronic ions. *M. A. Uddin, A.K.F. Haque, M. S. Mahbub, K.R. Karim, A.K. Basak, B.C. Saha*, Int. J. Mass Spectrom. **244**, 76 (2005).
65. Empirical model for the ionization cross sections of H- and He-like ions, *M. A Uddin, A.K.F. Haque, K.R. Karim and A.K. Basak*. Physica Scripta **72**, 389 (2005).
66. Electron-impact ionization of hydrogen and lithium like systems. *M. A. Uddin, A.K.F. Haque, K.R. Karim and A.K. Basak and B.C. Saha*, Phy. Rev. A, **72**, 032715 (2005).
67. Potentials for the $a^{-40,44,48}\text{Ca}$ elastic scattering. *M. N A. Abdullah, A.B. Idris, A. S. B. Tariq, M.S. Islam, S. K. Das, M. A. Uddin, A.S. Mandal, A. K. Basak, I. Reichstein, H.M.S. Gupta, F. B. Malik*. Nucl. Physics A **760**, 40 (2005).
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69. Electron impact ionization of helium isoelectronic atomic targets, *M. A. Uddin, A. K. Basak and B. C. Saha*. Int. J. Quant. Chem. **100**, 184 (2004).
70. Electron impact single ionization of ionic targets with $q > 2$. *M. A. Uddin, A. K. Basak, A. K. M. A. Islam*, J. Phys. B: At. Mol. Opt. Phys. **37**, 1909 (2004).
71. Calculations of Electron impact single ionization of helium isoelectronic systems. *M. A. Uddin, A. K. F. Haque, A. K. Basak and B. C. Saha*, Phys. Rev. A **70**, 032706 (2004).

2003

72. K-shell ionization of atoms. *M. Alfaz Uddin, and A. K. Basak*, Physica Scripta **67**, 37 (2003).
73. Relativistic effects in K-shell electron impact ionization. *M. Alfaz Uddin, and A. K. Basak*, Physica Scripta **67**, 112 (2003).
74. Electron impact ionization of hydrogenic atoms. *M. Alfaz Uddin, and A. K. Basak* Physica Scripta **68**, 192 (2003).

75. Molecular versus squared Woods-Saxon alpha-nucleus potential for $^{27}\text{Al}(a,t)^{28}\text{Si}$ reaction. *M. N. Abdullah, M. S. Mahbub, A. S. Mandal, M. A. Uddin, A. K. Basak, H. M. Sen Gupta and F. B. Malik*, J. Phys. G: Nucl. Part. Phys. **29**, 1259 (2003).
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