

: CURRICULUM VITAE:  
ARUN KUMAR BASAK

=====

---

PRESENT AFFILIATION      Professor Emeritus (life-long appointment)  
Department of Physics, Rajshahi University, Bangladesh  
Tel.(Res) +880-721 773939.

---

DATE OF BIRTH              October 17, 1941

---

NATIONALITY                Bangladeshi

---

SPECIALIZATION            (Low Energy) Nuclear Physics

---

EDUCATION

Ph.D. 1975                  Department of Physics, University of Birmingham, England.  
Thesis : "Polarization Effects in (d,p) Reactions",  
Supervisors : Dr. J A R Griffith & Dr. S Roman.

M.Sc. 1963                  Department of Physics, Rajshahi University, Bangladesh,  
First Class, Position : FIRST ##

B.Sc. 1961                  Rajshahi Govt. College, Examining body : Rajshahi Univeristy,  
Honours                      First Class, Position : FIRST. #

Intermediate                Edward College, Pabna, Examining body : Rajshahi University,  
(Sc.) 1959                      First Division, Position : SECOND \*\*.

Matriculation                Examining body : East Pakistan Secondary Education Board,  
1957                              Dacca, First Division.

---

SCHOLARSHIPS/ AWARDS

2017                      **The Rotary Club Metropolitan Rajshahi Vocational Award 2017**

2017                      **Razzaq-Shamsun Lifetime Achievement Award 2016**

2016                      **The Daily Star Silver Jubilee 2016 Award**

2006                      **Bangladesh Academy of Sciences Gold Medal 2003 in Physical Sciences**  
**(Sr Group)**

1972-75                  Commonwealth Postgraduate Scholarship

1963                      **## Rajshahi University Gold Medal for securing more than 75% marks.**

1961-63                  | # Merit Scholarship, Rajshahi University  
                                 | SEATO Scholarship

1965                      **\*\* Merit Scholarship (for securing the highest marks in the Faculty of Science) for**  
**Higher studies at Imperial College, London.** His Passport was seized before boarding the  
plane by the Govt. of Pakistan. His passport was not returned during the Pakistani  
regime and was released by the Govt. of Bangladesh in 1972.

Continued ...

---

 DISTINCTIONS

- D01/1964** Paper titled “Properties of Hyperons and Hyperfragments ...” by A. Husain, A. K. Basak and others, presented by Professor Husain at the 1964 Peking Symposium, drew favourable comments, “the **paper has thrown important new lights ... and would be of significance to determining the Baryon models**” from the noted Japanese particle physicist Shoichi Sakata, as reported in **Science Chronicle**, Vol III, 1964, page 50 and reported in the daily newspapers of Pakistan on 28 August, 1964.
- D02/1985** First Installation of Computer in Rajshahi University reported in the article titled “রাজশাহী বিশ্ববিদ্যালয়ে কম্পিউটার স্থাপন” of 7 Sept. 1985 issue of “Daily Banglar Bani”. This centre is responsible for creating Computer awareness in Northern region of Bangladesh.
- D03/1990** Installation of Computer in Shahjalal University of Science & Technology (SUST) as the Founder Director of Computer Centre and Use of the Computer for conducting the Administration and all examinations including the Admission test of SUST.
- D04/2006** “Professor Dr. Arun Kumar Basak: A man with a difference”, reported by Emdadul Haque published in August 11-16, 2006 issue of News Magazine PROBE. On p. 11.
- D05/2006** In recognition of the dedicative works of Professor A. K. Basak, an article titled, “আমার শিক্ষক আমার আদর্শ” (My teachers are my ideals) written by Professor Dr. M. Asabul Haque, published in 22 August issue of “Daily Protham Alo”, page 11.
- D06/2007** **Annual BASAK AWARDS and BASAK SCHOLARSHIPS (donor: Peninsula Welfare Trust)** are introduced in Rajshahi Univer. in recognition of the dedicative works of Professor A. K. Basak in science teaching and research.
- D07/2009** Live telecast on the academic activities of Prof. Arun K. Basak on NTV television News-casts 24 hours on 22 August, 2009.
- D08/2011** Profile of Prof. Arun K. Basak, published in Dhaka University Microbiology Alumni Association (DUMAA) News Letter & Science News, Vol. 1, Issue 3, Sept. 2011.
- D09/2012** Profile of Prof. Arun K. Basak in the book titled, “ভারতীয় উপমহাদেশের বিজ্ঞানী ও বিজ্ঞানচর্চা” (Scientists and scientific activities in the Indian Subcontinent), authored by Professor Dr. Nishith Kumar Paul, Aleya Book Depot, 38/2Ka Banglabazar, Dhaka 1100, Bangladesh.
- D10/2013** Published work of Prof. Arun K. Basak and his collaborators has been highlighted in the website, <http://iopscience.iop.org/0954-3899/labtalk-article/54688> with headline, “**The realistic nature of nucleus-nucleus interactions**”. This is reported in the Daily Manab Zamin, 03 Oct. 2013 and Daily KalerKantho, 07 October, 2013.
- D11/2015** Invited article on “রাজশাহী বিশ্ববিদ্যালয় ও উচ্চশিক্ষার মান উন্নয়ন” (Rajshahi University and Quality-enhancement of Higher Education) for the Souvenir Book of 9<sup>th</sup> Convocation 2015 in Rajshahi University.
- D12/2015** In recognition of the pioneering contribution in building computational research capacity at the University of Rajshahi and Shahjalal University of Science & Technology (SUST), Sylhet, Bangladesh, the high performance computer-cluster at University of Rajshahi has been named “Arun-hpcc” [see [www.arun-hpcc.ru.ac.bd](http://www.arun-hpcc.ru.ac.bd)].

Continued ...

- D13/2015** Invited talk on the 2015 World Philosophy Day by at the Rajshahi University Celebration titled, “মানুষের কল্যাণে দর্শনের ভূমিকা (Philosophy in human welfare)”, published in Philosophical Journal Anwesan, Vol. X, 2015 by the Department of Philosophy, Rajshahi University.
- D14/2015 Live telecast of Maasranga TV Interview** of Arun Kumar Basak on 23 Nov, 2015
- D15/2016 Highlighted feature** titled “ল্যাভেই কাটে দিন (Whole Day in the Lab)” on the life and achievements of Arun Kumar Basak, presented on the ‘Campus’ page in the Daily KalerKantho issue of 24 August 2016.
- D16/2016 Invited as one of two Key-note speakers in Seminar on ‘Acharya Jagadish Chandra Bose’, held on November 25, 2016 arranged by Center for Advanced Studies and Research in Biological Sciences, University of Dhaka.
- D17/2017 Invited as one of Four Guests of Honour in the 145<sup>th</sup> Anniversary of Rajshahi College, held on April 01, 2017.
- D18/2017 Invited as Chief Guest in the Opening Ceremony of Ceramic and Sculpture Exhibition in the Faculty of Fine Arts, Rajshahi University, held on April 13, 2017.
- D19/2017 Invited speaker in Special Seminar on , “বাংলা ভাষায় বিজ্ঞান চর্চা: দুই বিজ্ঞানীর উদাহরণ (Science in Bangla: Example of Two Pioneers )”, held on July 10, 2017 arranged by Institute of Bangladesh Studies, Rajshahi University.
- D20/2017 Invited ‘রবিরশ্মি বক্তা’, রবীন্দ্র উৎসব ১৪২৪’ (speaker in ‘পুরস্কার বিতরণ পর্ব’ (Prize Giving Ceremony held on October 13, 2017 at Rajshahi University Nazrul Auditorium arranged by জাতীয় রবীন্দ্রসঙ্গীত সম্মিলন পরিষদ, রাজশাহী শাখা, Rajshahi University.
- D21/2018 Invited as Key-note speaker in the Celebration of 124<sup>th</sup> Birthday of Seminar on Satyendranath Bose on January 01, 2018, at Nabab Nawab Ali Senate Bhaban Auditorium, Dhaka University. organized by Bose centre Center for Advanced Studies and Research in Natural Sciences, University of Dhaka.
- D22/2018 Invited speaker in AASSA-BAS Workshop on September 13, 2018, at National Museum of Science & Technology Bhaban, Dhaka. organized by AASSA-BAS on “Challenges and Impacts of Quality in Scientific Publications”.
- D23/2018 Invited Keynote speaker on Rokeya Day, December 09, 2018, at Rokeya Hall of Rajshahi University “বেগম রোকেয়া : মুসলিম নারী জাগরণের অগ্রদূত”.
- D24/2019 Invited speaker in the Ceremony of Dean’s Awards, School of Management and Business Administration. Khulna University on 20 February. 2019 on “Challenges and Enhancement of Quality Education”
- D25/2019 Profile and Interview titled , “টানা ৫৬ ঘন্টা ল্যাভে ছিলাম”, in December 20, 2019 issue of Daily Kalerkantho, Bangladesh, page 4 of Special feature “কথায় কথায়”।
- D26/2020 Convocation Speaker in the 1<sup>st</sup> Convocation of Jagannath University, Dhaka held on 11 January, 2020.

Continued .....

---

**PROFESSIONAL VISIT TO OTHER INSTITUTIONS**

- 1971 \* Visiting Teacher, Vivekananda Centenary College, Rahara, Khardaha, Kolkata, India
- 1981-82 \* Post Doctoral Fellow in Nuclear Physics, The Ohio State University, USA.
- 1979-81 \* Research Fellow in Low Energy Nuclear Physics,  
University of Birmingham, United Kingdom
- 1975-76 \* Research Fellow in Low Energy Nuclear Physics,  
University of Birmingham, United Kingdom.
- 1988 \* Associate Member, ICTP, Italy ( Feb to Mar. 1988)
- 1995 \* Associate Member, ICTP Italy ( May to June 1995)
- 1997 \* Visiting Scholar, Southern Illinois University at Carbondale, USA (April-May, 1997)
- 1997 \* Visiting Professor, Kent State University, USA ( 1-15 June 1997) and presented a seminar talk in the Department of Physics, Kent State University.
- 1999,2001,02,04,07 \* Visiting Research Professor, Southern Illinois University, Carbondale, USA(May-July).
- 2007 \* Invited Speaker to the Int. 31<sup>st</sup> Int. Workshop. on Condensed Matter Theories (Bangkok, Thailand, 03-08, 2007).

---

**PROFESSIONAL MEMBERSHIPS**

- 1987-96 \* Associate, International Centre for Theoretical Physics (ICTP), Trieste (Italy)
- 1987-to date \* Fellow, Bangladesh Physical Society.
- 1990-to date \* Member, Bangladesh Computer Society
- 2000-02 \* Member, Senate, National University, Bangladesh.
- 2000-03 & 2013-to date \* Member, American Physical Society.
- 2000-05 \* Senior Associate, Abdus Salam ICTP, Trieste (Italy)
- 1998-to date \* Fellow, Bangladesh Academy of Sciences.
- 2001-to date \* Fellow, Institute of Physics (London).
- 2011 - 2014 \* Member, Regent Board, Bangabadhu S M.R. Sc. & Tech. University, Bangladesh.
- 2016 – todate \* Member, Editorial Board, Multi-Disciplinary Journal, Bangladesh UGC.

---

**TEACHING EXPERIENCE**

- 2009-todate Professor Emeritus (Life-long)
- 1994-08 Professor of Physics, Rajshahi University
- 1990-94 Professor of Physics, Shahjalal University, Bangladesh.
- 1984-90 Professor of Physics, Rajshahi University
- 1978-84 Assoc.Professor of Physics, Rajshahi University
- 1964-78 Assist.Professor of Physics, Rajshahi University
- 1963-64 Lecturer in Physics, Rajshahi University.

---

**ADMINISTRATIVE EXPERIENCE**

- 1990-94 Founder Head, Physics Department, Shahjalal University.
- 1990-94 Founder Director, Computer Centre, Shahjalal University
- 1990-92 First Dean, School of Physical Sciences, Shahjalal Univ.

Continued ....

- 1985-88 Chairman, Physics Department, Rajshahi University.  
 1986-89 Founder Administrator, Computer Centre, Rajshahi University.

---

#### FOUNDING SERVICES RENDERED

- 1986-89 Founder Administrator, Computer Centre, Rajshahi University.  
 1990-94 First Teacher in Shahjalal University  
 1990-92 First Dean, School of Physical Sciences, Shahjalal University  
 1990-94 First Head, Department of Physics, Shahjalal University.  
 1990-94 Founder Director, Computer Centre, Shahjalal University  
 1999-2009 Founder Chairman, Alumni Organizing Committee, Rajshahi University.

---

#### RESEARCH GRANTS SECURED (Extramural)

**International Collaborative Projects** (As Co-PI with PI Professor F. Bary Malik, Southern Illinois University, Carbondale, U.S.A.): (i) " Determination of alpha-nucleus interaction from elastic, inelastic and particle transfer reactions involving alpha-particles". **Grant No. INT-9808892**

Amount : \$ **37,000.00 from National Science Foundation (NSF), USA** for the period Aug.1998-July 2001 and (ii) " Theoretical studies of reaction processes in light and medium nuclei involving alpha-particles". **Grant No. INT-0209584, Amount :\$ 37,000.00 from NSF, USA** for the period Aug.2002-July 2008.

---

#### SUMMARY OF SCHOLARLY ACTIVITIES

(a) **Publications** (research articles):

- \* 100 publications in international refereed journals with non-zero impact factors & chap. Books.
- \* 14 publications in home refereed journals.
- \* 30 articles in conference proceedings (selective).
- \* 10 articles as internal reports (selective)
- \* 1 article under review with Physical Review C (USA).

(b) **Book**

- ‘Byabaharic Padyathartha Bijnan’ (Practical Physics in Bengali for Honours Level)  
 - S A Chawdhury and A K Basak.

(c) **Important articles in Books/News Media**

**M1/** বিশ্ববিদ্যালয় পর্যায়ে গবেষণা ও শিক্ষকের ভূমিকা (Researches in universities and role of teachers)

- Special 2011 Eid-ul-Fitr Magazine issue of Daily Janakantha, Bangladesh, page 182

**M2/** বঙ্গবন্ধু শেখ মুজিবুর রহমান বিজ্ঞান ও প্রযুক্তি বিশ্ববিদ্যালয় এর শিক্ষাকার্যক্রমের উদ্বোধনে আমার কিছু কথা (My views on the opening ceremony of academic programs in Bangabandhu Sheikh Mujibur Rahman Science & Technology University (BSMRSTU), Gopalganj, Bangladesh.

- Invited article for Souvenir Book of BSMRSTU on 19 January 2013.

Continued ....

- M3/ Science and Technology for development of Bangladesh  
- April 29, 2013 issue of Daily Independent, Bangladesh, page 14.
- M4/ Science education and policy  
- May 6, 2013 issue of Daily Independent, Bangladesh, page 14.
- M5/ বিজ্ঞানই উন্নয়নের শর্ত (Science is the prime ingredient of development)  
- March 31, 2014 issue of Daily Jugantor, Bangladesh, page of sub-editorial.
- M6/ প্রশ্নপত্র ফাঁস ও জাতীয় শিক্ষানীতির বাস্তবায়ন (Question leakage and implementation of national education policy) - May 7, 2014 issue of Daily Jugantor, Bangladesh, page 5.
- M7/ সৃজনশীল শিক্ষার মান উন্নয়ন (Quality enhancement of creative education)  
- June 30, 2014 issue of Daily Kalerkantho, Bangladesh, page 14.
- M8/ রাজশাহী বিশ্ববিদ্যালয় ও উচ্চশিক্ষার মান উন্নয়ন (Rajshahi University and Quality-enhancement higher education) - Invited article for Souvenir Book of Rajshahi University 9<sup>th</sup> Convocation 2015.
- M9/ শিক্ষকদের মর্যাদা বিনষ্ট হতে দেবেন না (Dignity of teachers should not be undermined)  
- July 7, 2015 issue of Daily Jugantor, Bangladesh, page 4.
- M10/ বিশ্ব দর্শন দিবস (The World Philosophy Day)  
- November, 2015 issue of Daily Jugantor, Bangladesh, page 4.
- M11/ Science for World Peace  
- September 7, 2016 (The World Science Day) issue of Daily Sun, Bangladesh, page 6  
& September 12, 2016 (Eid Special) issue of Daily the Independent, page 7.
- M12/ সামাজিক ব্যাধির মূল উৎস সীমাহীন লোভ (Endless greed is the main source of social impediments)  
- May 16, 2017 issue of Daily Jugantor, Bangladesh, page 4.
- M13/ বিজ্ঞানে বাংলা ভাষা (**Science education in Bangla**)  
- July 14, 2017 issue of Daily Samakal, Bangladesh, page 8.
- M14/ কোথাও নিউটন আইনস্টাইনকেও ছাড়িয়ে হকিং (**Hawkin excels Newton and Einstein in some Aspects**) [Dictation written by Redwanul Haque] - March 14, 2018 issue of Daily Kalerkantho, Bangladesh, page 1.
- M15/ তারা অনেক পড়েও জ্ঞান আহরণ করতে পারে না (**Much reading does not help them acquire adequate knowledge**)  
- May 22, 2018 issue of Daily Jugantor, Bangladesh, page 5.
- M16/ Safeguarding science and technology in Bangladesh  
- August 11, 2018 issue of Daily New Nation, Bangladesh, page 5  
& August 12, 2018 issue of Daily Sun, Bangladesh, page 6.
- M17/ রূপপুর বিদ্যুৎ কেন্দ্র আমাদের চেতনার উন্মেষ ঘটাবে (Rooppur Power Plant will rouse our conscience)  
- August 20, 2018 issue of Daily Jugantor, Bangladesh, page 5.
- M18/ নারী জাগরণের অগ্রদূত তোমাকে প্রশংসা (Humble Salute to the Pioneer of Women Renaissance)  
- December 9, 2018 issue of Daily Jugantor, Bangladesh, page 5.
- M19/ For peace and prosperity Education with a focus on values are needed before the tertiary stage – April 4, 2019 issue of Daily New Nation, Bangladesh, page 5 (Editorial).
- M20/ সবার উপরে মানুষ সত্য, তাহার উপরে নাই (Humanity excels devina love)  
- August 16, 2019 issue of Daily Bangladesh Pratidin, page 4 (Editorial)..

Continued ....

- M21/ রাজনৈতিক বিভিন্নতার বন্ধনশক্তি ধর্মনিরপেক্ষতা (Binding force of political ideologies: Secularilism)  
- September 09, 2019 issue of Daily Samakal, page 9.
- M22/ আমরা শেখার আনন্দ সৃষ্টি করতে ব্যর্থ (We fail to trigger interest of acquiring knowledge)  
- Special feature “স্বপ্ন নিয়ে” in page 5 of January 19, 2020 issue of Daily Prothom Alo.

(d) Popular articles presented in Seminars

- S1/ Alpha- and lithium-nucleus interaction potential and nucleosynthesis in the universe – invited popular seminar talk in the memory of Dr. M. S. Zoha arranged by the Department of Chemistry, Rajshahi University, Bangladesh in February, 2011.
- S2/ Invited talk at Shahjalal Univ. of Science & Technology (SUST) titled, “বিশ্ববিদ্যালয় পর্যায়ে গবেষণা ও শিক্ষকের ভূমিকা” (Research at University Level & Teacher’s Role) on 12 June, 2011.
- S3/ Presidential address highlighting special features of Life and Activities of Sir P. C. Ray to improve Science Education and research in Bangladesh in Discussion Ceremony arranged by Bangla Academy in its Program-series of Amar Ekushe, 17 Feb.2012 at 4 pm as Tribute to Sir P. C. Ray on his 150<sup>th</sup> Birth Anniversary
- S4/ উন্নয়নে বিজ্ঞান ও প্রযুক্তি (Role of Science & Technology towards Developments) arranged by the Ministry of Science & Technology on 23 Feb. 2013 at Rajshahi, Bangladesh)
- S5 বিশ্ববিদ্যালয়ে কোয়ালিটি প্রশিক্ষণ : কিছু নিবেদন (Methods Quality Teaching in a University) – invited Academic leader’s talk in the Induction Program 2014 of fresh teachers, arranged by Centre for Excellence in Teaching and Learning, University of Rajshahi.
- S6 বিশ্ববিদ্যালয়ে কোয়ালিটি পঠন-পাঠন (Methods of Quality Teaching and Learning in a University) – invited Guest Speaker covering talks on (i) Philosophy & Ethical Principles of University Teaching and (ii) Role on Professors in Academia and Society in the Training on Pedagogy Module I Program 11-13 June 2015 of fresh teachers, arranged by Centre for Excellence in Teaching and Learning (CETL), Khulna University.
- S7 আচার্য জগদীশ বসু : বিশ্ববিজ্ঞানে একতা ও সৌহার্দের প্রতীক (Acharya Jagadish Chandra Bose: a Symbol of Unity and Amity) – invited Guest Speaker in a Seminar arranged by the Center of Advanced Studies and Research in Biological Sciences, University of Dhaka on 25 November, 2016
- S8 বাংলা ভাষায় বিজ্ঞান চর্চা: দুই বিজ্ঞানীর উদাহরণ (Science in Bangla: Example of Two Pioneers )” – invited Guest Speaker in a Special Seminar arranged by the Institute of Bangladesh Studies, Rajshahi University on 10 July, 2017.
- S9 একবিংশ শতাব্দীতে ‘বোসন’ -এর জয়যাত্রা (Conquest of Bosons in the Twentyfirst Century) – invited Keynote Speaker in the 124<sup>th</sup> Birth Anniversary of Satyendra Nath Bose arranged by the Center of Advanced Studies and Research in Natural Sciences, University of Dhaka on 1 January, 2018.

Continued ....

e) **Supervising the research students**

- \* **Ph.D.** Dissertation directed: 06
- \* **M.Phil.** Dissertation directed: 02
- \* **M.Sc.** Dissertation directed: 63
- \* **M.Sc.** Dissertation directing : 2

**FAVOURITE HOBBY**

**Gardening** is the most favourite hobby. He was awarded the **First and Champion Prizes** in the Kitchen Garden Competition of 1978-79, held under the auspices of Horticulture Development Board, Government of Bangladesh.

Continued ....

List of Research Papers of Arun. K. Basak

Publications in International Journals

- P01. A Possible Decay in Flight of ( ${}^6\text{Li}_\Lambda$ )\*  
- A.S. Mondal, A.K. Basak, M.M. Kasim and A. Husain  
Lettere al Nuovo Cimento **5**, 1057 (1972)
- P02. Tensor Analysing Power of (d,p) and (d,t) Reactions on  ${}^{142}\text{Nd}$   
- A.K. Basak, J.A.R. Griffith, M. Irshad, O. Karban, E.J. Ludwig, J.M. Nelson and S. Roman  
Nuclear Physics **A229**, 219 (1974)
- P03. A Probable Example of a Non-mesonic Double Hypernucleus  
- A.S. Mondal, A.K. Basak, M.M. Kasim and A. Husain  
Nuovo Cimento **28**, 42 (1975)
- P04. Tensor Analysing Powers in Deuteron Elastic Scatteing by  ${}^{50}\text{Cr}$ ,  ${}^{66}\text{Zn}$  and  ${}^{67}\text{Zn}$   
- O. Karban, A.K. Basak, J.A.R. Griffith, S.Roman and G. Tungate  
Nuclear Physics **A266**, 413 (1976)
- P05. The j-dependence of ( ${}^3\text{He},d$ ) and ( ${}^3\text{He},\alpha$ ) Reaction Analysing Powers in the 1p shell  
- O. Karban, A.K. Basak, J.B.A. England, G.C. Morrison, J.M. Nelson, S. Roman  
and G. Tungate  
Nuclear Physics **A269**, 312 (1976)
- P06. Investigation of  $d_{5/2}$ - $d_{3/2}$  Admixing in the Pickup Strength to the Excited States of  ${}^{22}\text{Ne}$   
and  ${}^{26}\text{Mg}$   
- N.E. Sanderson, S. Roman, A.K. Basak, J.B.A. England and J.M. Nelson  
Physical Review Letters **37**, 1672 (1976)
- P07. Polarization Transfer in  ${}^{28}\text{Si}(d,p){}^{29}\text{Si}_{g.s.}$  Reaction and Deuteron D-state Effects  
- A.K. Basak, J.A.R. Griffith, O. Karban, J.M. Nelson, S.Roman and G. Tungate  
Nuclear Physics **A275**, 381 (1977)
- P08. Spectroscopy of the  ${}^{50}\text{Cr}(d,p){}^{51}\text{Cr}$  Reaction and the Deuteron D-state Effects  
- A.K. Basak, J.A.R. Griffith, M. Irshad, O. Karban, E.J. Ludwig, J.M. Nelson, S. Roman  
and G. Tungate  
Nuclear Physics **A278**, 217 (1977)
- P09. Scattering of 33 MeV Polarized  ${}^3\text{He}$  Particles by Hydrogen and Helium Isotopes  
- O. Karban, A.K. Basak, C.O. Blyth, W. Dahme, J.B.A. England, J.M. Nelson,  
N.T. Okumusoglu, G.G. Shute and R. Vlastou  
Journal of Physics **G 3**, 571 (1977)
- P10. Polarization Effects in the Elastic Scattering of  ${}^3\text{He}$  and ( ${}^3\text{He},d$ ) Reaction on  ${}^{58}\text{Ni}$   
- S. Roman, A. K. Basak, J.B.A. England, O. Karban, G.C. Morrison and J.M. Nelson  
Nuclear Physics **A284**, 365 (1977)

Continued ...

- P11. Analysing Powers of the (d,p) and (d,t) Reactions by 12 MeV Polarized Deuterons in the 1p Shell  
 - A.K. Basak, J.A.R. Griffith, O. Karban, S. Roman, G.Tungate and F.D. Santos  
 Nuclear Physics **A286**, 420 (1977)
- P12.  $^3\text{He}$  D-state Effects in (d, $^3\text{He}$ ) Reactions  
 - S. Roman, N.E. Sanderson, A.K. Basak, J.B.A. England, J.M. Nelson, F.D. Santos and A.M. Eiro  
 Nuclear Physics **A289**, 269 (1977)
- P13. Tensor Analysing Powers of (d,p) Reactions on  $^{28}\text{Si}$ ,  $^{67}\text{Zn}$ ,  $^{90}\text{Z}$  and  $^{208}\text{Pb}$   
 - A.K. Basak, J.A.R. Griffith, O. Karban, J.M. Nelson and S. Roman  
 Nuclear Physics **A295**, 111 (1978)
- P14. Scattering of Polarized  $^3\text{He}$  by  $^4\text{He}$  between 18 MeV and 32 MeV  
 - Y.W. Lui, A.K. Basak, C.O. Blyth, O. Karban, J.M. Nelson and S. Roman  
 Nuclear Physics **A297**, 189 (1978)
- P15. Elastic Scattering of 12.4 MeV Tensor Polarized Deuterons  
 - G. Tungate, J.A.R. Griffith, O. Karban and A.K. Basak  
 Fizika **10 Sppl**, 51 (1978)
- P16. The Identification of a Cascade Hypernucleus  
 - A.S. Mondal, A.K. Basak, M.M. Kasim and A.Husain  
 Nuovo Cimento **54A**, 333 (1979)
- P17. Analysing Powers in the Three-body Breakup Reactions from  $^3\text{He}+^2\text{H}$   
 - N.T. Okumusoglu, A.K. Basak and C.O. Blyth  
 Nuclear Physics **A349**, 339 (1980)
- P18. Interaction of Polarized  $^3\text{He}$  Particles with  $^{24}\text{Mg}$   
 - F. Entezami, A.K. Basak, O. Karban, P.M. Lewis and S. Roman  
 Nuclear Physics **A366**, 1 (1981)
- P19. Spectroscopy of  $^{62}\text{Ni}$  with the  $^{61}\text{Ni}(d,p)$  Reaction  
 - O. Karban, A.K. Basak, F.Entezami and S. Roman  
 Nuclear Physics **A366**, 68 (1981)
- P20. Scattering and Charge-Exchange Reactions with Polarized  $^3\text{He}$  on Lithium Isotopes  
 - A.K. Basak, O. Karban, S. Roman, G.C. Morrison, C.O. Blyth and J.M. Nelson  
 Nuclear Physics **A368**, 74 (1981)
- P21. Polarization Effects in  $^3\text{He}$  Induced Transfer Reactions on Lithium Isotopes  
 - A.K. Basak, O. Karban, S.Roman, G.C. Morrison, C.O. Blyth and J.M. Nelson  
 Nuclear Physics **A368**, 93 (1981)
- P22. Analysing Powers of the  $^{54}\text{Fe}(^3\text{He},d)^{55}\text{Co}$  and  $^{54}\text{Fe}(^3\text{He},\alpha)^{53}\text{Fe}$  Reactions  
 - O. Karban, A.K. Basak, F.Entezami, P.M. Lewis and S. Roman  
 Nuclear Physics **A369**, 38 (1981).

Continued ... ..

- P23. Configuration of Particle-Hole States in  $^{16}\text{O}$   
 - O. Karban, A.K. Basak and S. Roman  
 Physics Letters **B112**, 433 (1982).
- P24. The Elastic and Inelastic Scattering of 33 MeV Polarized  $^3\text{He}$  from Oxygen and Iron Isotopes  
 - P.M. Lewis, A.K. Basak, J.D. Brown, P.V. Drum, O. Karban, E.C. Pollacco and S. Roman  
 Nuclear Physics **A395**, 204 (1983)
- P25. Direct Observation of the Alpha Particle D-state in  $(d,\alpha)$  Reaction  
 - J.A. Tostevin, J.M. Nelson, O. Karban, A.K. Basak and S. Roman  
 Physics Letters **149B**, 9 (1984)
- P26. Study of  $^{14}\text{N}$  by One-nucleon Transfer Reactions induced with Polarized  $^3\text{He}$   
 - P.V. Drum, O. Karban, A.K. Basak, P.M. Lewis, S. Roman and G.C. Morrison  
 Nuclear Physics **A448**, 93 (1986)
- P27. The Mechanism of the  $^7\text{Li}(d,2\alpha)n$  Reaction from  $E_d=3$  to 15 MeV  
 - R.E. Warner, B.A. Vaughan, J.A. Ditusa, J.W. Rovine, R.S. Wakeland, C.P. Browne,  
 S.E. Darden, S. Sen, A. Nadasen, A. Basak, T.R. Donoghue, T. Rinckel, K. Sale,  
 G.C. Ball, W.G. Davies, A.J. Ferguson and J.S. Forster  
 Nuclear Physics **A470**, 339 (1987)
- P28. Parity-Violating Effects in the  $^6\text{Li}(\alpha,\gamma)^{10}\text{B}$  Capture Reaction via the 5.1 MeV Doublet Resonance  
 - A.K. Basak  
 Nuclear Physics **A499**, 353 (1989)
- P29. Level Structure of  $^{52}\text{Cr}$  from the  $^{51}\text{V}(^3\text{He},d)$  Reaction  
 - M.A. Basher, H.R. Siddique, A. Husain, A.K. Basak and H.M. SenGupta  
 Physical Review **C 45**, 1575 (1992)
- P30. A study of  $^{64}\text{Cu}$  levels using the  $(^3\text{He},p)$  reaction at 18 MeV  
 - A.K. Basak, M.A. Basher, A. S. Mondal, M. A. Uddin, S. Bhattacharjee,  
 A. Husain, S.K. Das, Masudul Haque and H. M. Sen Gupta  
 Physical Review **C 56**, 1983 (1997)
- P31. Anomaly in the normalization constant of the  $(^3\text{He},p)$  reaction.  
 - Masudul Haque, S. K. Das, A.K. Basak and H. M. Sen Gupta  
 Nuovo Cimento **111A**, 1131 (1998).
- P32. Potential description of anomalous large angle scattering of alpha-particles  
 - A.S.B. Tariq, A.F.M.M. Rahman, S.K. Das, A.S. Mondal, M.A. Uddin, A.K. Basak,  
 H.M. Sen Gupta and F. B. Malik.  
 Physical Review **C 59**, 2558 (1999).
- P33. Normalization Constant of the  $(\alpha,t)$  reaction  
 - S. K. Das, A. K. Basak, A.S. Mondal, A.S.B. Tariq, A.F.M.M. Rahman, Dipika R. Sarker  
 and H. M. Sen Gupta  
 Nuovo Cimento, **112A**, 661 (1999).

Continued ...

- P34. Effect of alpha-nucleus potential on the  $^{27}\text{Al}(\alpha,t)$  reaction  
 - S. K. Das, A.S.B. Tariq, A.F.M.M. Rahman, P. K. Roy, M.N. Huda, A.S. Mondal, A. K Basak, H. M. Sen Gupta and F. B. Malik.  
 Physical Review C **60**, 044617 (1999).
- P35. Reply to ‘Comments on ‘The effect of alpha-nucleus potential on the  $^{27}\text{Al}(\alpha,t)$  reaction’’  
 - S. K. Das, A.S.B. Tariq, A.F.M.M. Rahman, P. K. Roy, M.N. Huda, A.S. Mondal, A. K Basak, H. M. Sen Gupta and F. B. Malik.  
 Physical Review C **62**, 049802 (2000).
- P36. Effect of  $\alpha$ -nucleus potential on the  $^{28}\text{Si}(\alpha,d)^{30}\text{P}$  reaction  
 - S. K. Das, A.S.B. Tariq, M. A. Uddin, A.S. Mondal, A. K. Basak, K.M. Rashid, H. M. Sen Gupta and F. B. Malik.  
 Physical Review C **62**, 054605 (2000).
- P37. Effect of  $\alpha$ -nucleus potential on the  $^{28}\text{Si}(\alpha,p)^{31}\text{P}$  reaction  
 - S. K. Das, A. K. Basak, K. Banu, A.S. Mondal, A.S.B. Tariq, A.F.M.M. Rahman, H. M. Sen Gupta and F. B. Malik  
 Physical Review C **62**, 054606 (2000).
- P38. Study of the effect of  $\alpha$ -nucleus interaction on the  $^{29,30}\text{Si}(\alpha,d)^{31,32}\text{P}$  reaction  
 - S. K. Das, A.S.B. Tariq, A.F.M.M. Rahman, S. Hossain, A.S. Mondal, A. K. Basak, H. M. Sen Gupta and F. B. Malik  
 Physical Review C **64**, 034605 (2001).
- P39. Investigation of inelastic  $\alpha$ - scattering on  $^{24}\text{Mg}$  and  $^{28}\text{Si}$   
 - A. K. Basak, M.N.A. Abdullah, A.S.B. Tariq, S. K. Das, A.F.M.M. Rahman, A.S. Mondal, H. M. Sen Gupta and F. B. Malik ,  
 European Physical Journal A **12**, 387 (2001).
- P40. Investigation of the effect of  $\alpha$ -nucleus interaction in the  $^{27}\text{Al}(\alpha,\alpha)^{27}\text{Al}$  scattering and  $^{27}\text{Al}(\alpha,d)^{29}\text{Si}$  reaction  
 -M.N.A. Abdullah, M.S. Mahbub, S. K. Das, A.S.B. Tariq, A. K. Basak, M. A. Uddin, H. M. Sen Gupta and F. B. Malik,  
 European Physical Journal A **15**, 477 (2002).
- P41. K-shell Ionization of atoms.  
 - M. Alfaz Uddin and A. K. Basak, Physica Scripta **67**, 37 (2003).
- P42. Relativistic Effects in K-shell Electron Impact Ionization  
 - M. Alfaz Uddin and A. K. Basak, Physica Scripta **67**, 112 (2003).
- P43. Molecular versus squared Woods-Saxon  $\alpha$ -nucleus potentials in the  $^{27}\text{Al}(\alpha,t)^{28}\text{Si}$  reaction  
 - M.N.A. Abdullah, S. K. Das, A.S.B. Tariq,, M.S. Mahbub, A.S. Mondal, A. K. Basak, H. M. Sen Gupta and F. B. Malik , Journal of Physics G **29**, 1259 (2003).
- P44. Electron impact ionization of hydrogenic atoms  
 - M. .A. Uddin, M.N.A. Abdullah, M.S. Mahbub and A. K. Basak,  
 Physica Scripta **68**, 192 (2003).

Continued ...

- P45. Cluster structure of  $^{16}\text{O}$   
 - M.N.A. Abdullah, S. Hossain, M.S.I. Sarker, S. K. Das, A.S.B. Tariq, M.A. Uddin, A. K. Basak, S. Ali, H. M. Sen Gupta and F. B. Malik ,  
 Euro. Phys. J. A **18**, 65 (2003).
- P46. Cluster structure in  $^{40,44,48}\text{Ca}$   
 - M.N.A. Abdullah, M.S.I. Sarker, S. Hossain, A.S.B. Tariq, S. K. Das, M.A. Uddin, A.S. Mondal, A.K. Basak, S. Ali, H.M. Sen Gupta and F.B. Malik.,  
 Phys. Lett. **571B**, 41 (2003).
- P47. Electron impact single ionization cross-sections of helium isoelectronic systems.  
 - M. Alfaz Uddin, A. K. Basak and B.C. Saha  
 Int. J. Quantum Chemistry **100**, 184 (2004).
- P48. Electron impact single ionization of light ionic targets with charge  $q > 2$ .  
 - M. Alfaz Uddin, A. K. Basak A.K. M.A. Islam and F.B. Malik  
 Journal of Physics B **37**, 1909 (2004).
- P49. Calculations of electron impact single ionization cross-sections of helium isoelectronic systems.  
 - M. Alfaz Uddin, M.A.K. Fazlul Haque, A. K. Basak and B.C. Saha.  
 Physical Review A **70**, 032706 (2004).
- P50. Band-mixing in  $^{29}\text{Si}$  and  $^{29}\text{P}$   
 - S. Hossain, M.N.A. Abdullah, S.K Das, M.A. Uddin, A. K. Basak, H.M. Sen Gupta, I.J. Thompson and F.B. Malik.  
 Journal of Physics G **31**, 309 (2005).
- P51. Computation of electron-impact K-shell ionization cross sections of atoms.  
 - M. A. Uddin, A.K.F. Haque, M. Masum Billah, A. K. Basak, K.R. Karim and B.C. Saha  
 Physical Review A **71**, 032715 (2005).
- P52. Electron impact ionization of beryllium isoelectronic ions.  
 - M. .A. Uddin, A.K. F. Haque, M.S. Mahbub, K.R. Karim, A. K. Basak and B.C. Saha  
 International Journal of Mass Spectrom. **244**, 76 (2005).
- P53. Potentials for the  $\alpha$ - $^{40,44,48}\text{Ca}$  elastic scattering.  
 - M.N.A. Abdullah, A.B. Idris, A.S.B. Tariq, M.S. Islam, S.K. Das, M.A. Uddin, A.S. Mondal, A. K. Basak, I. Reichstein, H. M. Sen Gupta and F.B. Malik  
 Nuclear Physics A **760**, 40 (2005).
- P54. Electron-impact ionization of hydrogen and lithium-like systems.  
 - M. .A. Uddin, A.K.F. Haque, M.S. Mahbub, A. K. Basak, K.R. Karim, B.C. Saha  
 Physical Review A **72**, 032715 (2005).
- P55. 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).

Continued ....

- P56. Alpha-Ni optical model potentials  
 - M.M. Billah, M.N.A. Abdullah, S.K. Das, M.A. Uddin, A. K. Basak, I. Reichstein, H. M. Sen Gupta and F.B. Malik  
 Nuclear Physics A **762**, 50 (2005).
- P57. Modified Kolbenvsedt model for the electron impact K-shell ionization cross sections of atoms.  
 - M. A. Uddin, A.K. F. Haque, K.R. Karim, A. K. Basak and F.B. Malik.  
 European Physical Journal D **37**, 361 (2006).
- P58. An 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.  
 Physical Review A **73**, 0122708 (2006).
- P59. 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 and F.B. Malik.  
 Physics Letters A **354**, 449 (2006).
- P60. 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 and F.B. Malik.  
 Physics Letters B **636**, 235 (2006).
- P61. Electron impact ionization of L-shell atomic species  
 - A.K. F. Haque, M.A. Uddin, A.K. Basak, K.R. Karim, B.C. Saha and F.B. Malik.  
 Physical Review A **73**, 052703 (2006)
- P62. Electron impact single ionization of mono- and di-positive ions.  
 - M. .A. Uddin, A.K.F. Haque, M.S. Mahbub, K.R. Karim and A. K. Basak.  
 Pramana (Ind. Academy of Sciences) **66**, 1119 (2006).
- P63. Electron impact ionization of M-shell atoms  
 - A.K. F. Haque, M.A. Uddin, A.K. Basak, K.R. Karim, B.C. Saha and F.B. Malik.  
 Physica Scripta **74**, 377 (2006).
- P64. Alpha-alpha potential up to 47.3 MeV bombarding energy.  
 - M.N.A. Abdullah, M.S. Sabra, M.M. Rashid, Z. Shehadeh, M.M. Billah, S.K. Das, M.A. Uddin, A.K. Basak, I. Reichstein, H.M. Sen Gupta and F.B. Malik  
 Nuclear Physics A **775**, 1 (2006).
- P65. Generalized Kolbenvsedtmodel for electron impact ionization of the K, L and M shell atoms.  
 - A.K.F. Haque, M.A. Uddin, M.A.R. Patoary, A.K. Basak, M.R. Talukder, K.R. Karim, B. C. Saha and F.B. Malik  
 European Physical Journal D **42**, 203 (2007)

Continued ...

- P66. Alpha-alpha and alpha-nucleus potentials: An energy-density functional approach.  
- Z.F. Shehadeh, A.K. Basak, M.N.A. Abdullah, M.A. Uddin, I. Reichstein, M.S. Sabra, and F.B. Malik  
International J. Modern Physics B **21**, 2429 (2007).
- P67. Empirical model for electron impact ionizations of neutral atoms.  
- M.R. Talukder, S. Bose, M.A.R. Patoary, A.K.F. Haque, M.A. Uddin, A.K. Basak and M. C. Kando  
European Physical Journal D **46**, 281 (2008)
- P68. Electron impact K-shell ionization cross sections of atoms at ultra-relativistic energies.  
- M.A.R.Patoary, M. A Uddin, A.K.F. Haque, A.K. Basak, M.R. Talukder, K.R. Karim and B.C. Saha.  
International J. Quantum Chemistry **108**, 1023 (2008).
- P69. Binary encounter model for the electron impact K-shell ionization of atoms  
- M.A.R.Patoary, M. A Uddin, A.K.F. Haque, M. Shahjahan, A.K. Basak and B.C. Saha.  
International J. Quantum Chemistry **108**, 1326 (2008).
- P70. 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 and F.B. Malik  
International J. Modern Physics B **22**, 4697 (2008)
- P71. 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  
Europhysics Letters **84** (2008) 52001.
- P72. Empirical model for the electron impact K-shell ionization cross section of atoms.  
- M.A.R. Patoary, M.A. Uddin, A.K.F. Haque, M. Shahjahan, M.R. Talukder, A.K. Basak B.C. Saha  
International J. Quan. Chemistry **109**, 897 (2009).
- P73. Modified version of revised Deutsch-Mark model for electron impact K-shell ionization cross sections of atoms at relativistic energies  
- A.K.F. Haque, M.S.I. Sarker, M.A.R. Patoary, M. Shahjahan, M. Ismail Hossain, M. A. Uddin, A.K. Basak and B.C.Saha  
International J. Quan. Chemistry **109**, 1442 (2009).
- P74. Potential description of  ${}^6\text{Li}$  elastic scattering by  ${}^{28}\text{Si}$   
- S. Hossain, M.N.A. Abdullah, A.K. Basak, S.K. Das, M.A. Uddin, A.S.B. Tariq, I. Reichstein, K. M. Rusek and F.B. Malik,  
Euro Physical J. A **41**, 215 (2009)

Continued ...

- P75. Generalized Kolbenvedt model for electrom impact ionization of K-, L- and M-shell of ions. - A.K.F. Haque, M. Shahjahan, M.A. Uddin, M.A.R. Patoary, A.K. Basak, B.C. Saha and F.B. Malik  
Physica Scripta **81** (2010) 045301.
- P76. An extended empirical formula for inner-shell ionization of atoms  
- A.K.F. Haque, M.R. Talukder, M. Shahjahan, M. A. Uddin, A.K. Basak and B.C.Saha  
Journal of Physics B **43** (2010) 15201
- P77. Dynamic polarization potential effects on vector analyzing powers of  ${}^6\text{Li}$ - ${}^{28}\text{Si}$  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** (2010) 47.
- P78. *Electron impact ionization in K, L and M-shell of atomic targets* .  
- M.A.R. Patoary, M.A. Uddin, A.K.F. Haque, M. Shahjahan, A.K. Basak and B.C. Saha  
International J. Quan. Chemistry, **111** (2011) 923.
- P79. An extended empirical formula for inner-shell ionization of atoms  
- A.K.F. Haque, M. A. Uddin, M. Shahjahan, M.R. Talukder, A.K. Basak and B.C.Saha  
Advances in Quantum Chemistry **61** (2011) 317-380.
- P80. 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  
Europhysics Letters **94** (2011) 62002.
- P81. Non-monotonic potentials for  ${}^6\text{Li}$  elastic scattering at 88 MeV  
- S. Hossain, M.N.A. Abdullah, M. Z. Rahman, A. K. Basak and F.B. Malik  
Physica Scripta **87** (2013) 015201.
- P82. Electron impact ionization cross-section of K-shell and H- to Be-isoelectronic series: an empirical model.  
- A.K.F. Haque, M. I. Hossain, T. I. Talukder, M. Hasan, M. A. Uddin, A.K. Basak, B.C. Saha and F. B. Malik  
Radiation Physics and Chemistry **91** (2013) 50.
- P83. Semi-empirical model for stopping cross sections of p,  $\alpha$  and Li ions.  
- M. A. Uddin, A.K.F. Haque, T. I. Talukder, A.K. Basak, B.C. Saha and F. B. Malik  
European Physical J. D **67** (2013) 214.
- P84. 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. Reichstein and F.B. Malik  
Journal of Physics G **40** (2013) 105109 [highlighted in <http://iopscience.iop.org>].

Continued ...

- P85. Elastic scattering of electrons by Ca atoms.  
- M. Hasan, M. A. Uddin, M. I. Hossain, A.K.F. Haque and A.K. Basak  
Canadian Journal of Physics **92** (2014) 206.
86. Dependence of the  $^{16}\text{O}+^{16}\text{O}$  nuclear potential on nuclear incompressibility .  
- S. Hossain, A.S.B. Tariq, Athoy Nilima, M. Sujana 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  
Physical Review C **91**, 064613 (2015).
- P87. Elastic impact stopping cross sections for various media ( $Z=3 - 100$ ).  
- A.K.F. Haque, M. A. R. Patoary, A.K. Basak and B.C. Saha  
Molecular Physics (Taylor and Francis) **114** (2016) 356 – 364. .
- P88. Electron Impact Atomic and Ionic Ionization: Analytical, semi-empirical and semiclassical Methods  
- A.K.F. Haque, M. A. A. R. Patoary, M. A. Uddin, A.K. Basak and B.C.Saha  
Advances in Quantum Chemistry (Elsevier) **73** (2016) 363 - 405.
- P89. Elastic scattering of electrons and positrons by atomic magnesium  
- M. Ismail Hossain, A.K.F. Haque, M. A. A. R. Patoary, M. A. Uddin and A.K. Basak  
Euro Physical J. D **70** (2016) 1 – 9.
- P90. Electron impact stopping powers for elemental and compound media  
- A. K. F. Haque, M. A. R. Patoary, M. A. Uddin, A. K. Basak, M. I. Hossain, M. Hasan, B. C. Saha and M. Maaza.  
Vacuum (Elsevier) **137** (2016) 123-129.
- P91. 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. A. R. Patoary, M. Atiqur, M. I. Hossain. A.K. Basak B.C.Saha and M. S. Mahbub  
Journal of Physics B, **50** (2017) 055005. <https://doi.org/10.1088/1361-6455/aa584a> .
- P92. An Analytical Model for The Electron Impact K-Shell Ionization Cross Sections of Atoms  
- M. A. Uddin, A.K. F. Haque, M.S. Mahbub, K.R. Karim, A. K. Basak and B.C. Saha  
International Journal of Mass Spectrom. (Elsevier) **415** (2017) 1-8.
- P93. Elastic scattering of electron and positron by Cadmium atom  
- A.K.F. Haque, M. I. Hossain, M. A. Uddin, M. A. R. Patoary, A.K. Basak, M. Maaza and B.C. Saha  
Molecular Physics (Taylor and Francis) **115** (2017) 566- 578

Continued ....

- P94. Electron Impact Ionization cross sections for inner L- and M-subshells of atomic targets at relativistic energies  
 - A.K.F. Haque, M. Maaza, M.M, Haque, M.A.R Patoary, M. A. Uddin, M. I. Hossain, M.S. Mahbub, A.K. Basak and B.C.Saha  
 Advances in Quantum Chemistry (Elsevier), Chapter 18, **73** (2017) 363 - 413.
- P95. Electron impact secondary electron emission from elemental and compound solids  
 - A.K.F. Haque, M. I. Hossain, M. A. Uddin, M. A. R. Patoary, A.K. Basak, M. Maaza and B.C. Saha  
 - A. K. F. Haque, M. M. Haque, M. A. R. Patoary, M. A. Uddin, M. I. Hossain, M. Selim Mahbub, A. K. Basak, M. Maaza and B. C. Saha  
 Vacuum (Elsevier) **141** (2017) 192-209.
- P96. Relativistic calculations for spin-polarization of elastic electrom-mercury scattering  
 -A.K.F. Haque, M.M Haque, P.P. Bhattacharjee, M. Alfaz Uddin, M A R Patoary, , M. I. Hossain. A.K. Basak, M. S. Mahbub, M.Maaza and B.C.Saha  
 Journal of Physics Communication (IOP) 1 (2017) 035014
- P97. Elastic scattering of  $e^{\pm}$  by Na atom  
 - M. Elias Hossain, M. A. R. Patoary, M. M. Haque, A.K.F. Haque, M. I. Hossain, M. A. Uddin, A.K. Basak, M. Maaza and B.C. Saha  
 Molecular Physics (Taylor and Francis) 116 (2018) 631—648
- P98. A study of the critical minima and spin polarization in the elastic electron scattering by the lead atom  
 -A.K.F. Haque, M.M Haque, M. Sohag Hossain, M. Ismail Hossain, M Atiqur R. Patoary, M. Maaza, A.K. Basak, B.C.Saha, M. Alfaz Uddin  
 Journal of Physics Communication (IOP) 2 (2018) 125013,  
<https://doi.org/10.1088/2399-6528/aaf6bd>
- P99. 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. A. R. Patoary, A.K. Basak, M. Maaza and B.C. Saha  
 Molecular Physics (Taylor and Francis), 117 (2018) 2303-2019.  
<https://doi.org/10.1080/00268976.2018.1548712>
- P100.**  $E^{\pm}$ -Ar scattering in the energy range  $1 \text{ eV} \leq E_i \leq 0.5 \text{ GeV}$   
 - M.M Haque, A.K.F. Haque, Dorris Jakubassa-Amundsen, M Atiqur R. Patoary, A.K. Basak, M. Maaza, B.C.Saha, M. Alfaz Uddin  
 Journal of Physics Communication (IOP) 3 (2019) 045011,

Continued .....

Publications in Home Journals

- P101.** Decay Characteristics of Charged  $\Sigma$  Hyperons.  
- A. Husain, A.K. Basak, M. Rahman and S.S. Huq  
Jour.of Nat.Science & Mathematics(Lahore) **5**, 191 (1965).
- P102.** Production of Hyperfragments and Ordinary Nuclear Fragments from the Interaction in Flight of 3 GeV/C K Mesons in Nuclear Emulsion  
- A.K. Basak, A. Husain, A.K.M.A.Islam, M.M. Kasim and M.A. Salam  
Scientific Researches (Dacca) **5**, 1 (1968).
- P103.** Study of the Non-mesonic Decay of Hypernuclei Produced by K Mesons of 3.0 GeV/C Momentum  
- M.M. Kasim, A. Husain, A.K. Basak, M.M. Rahman, A.S. Mondal, P. Ali and B.C. Saha  
The Nucleus (PAEC, Karachi) **6**, 138 (1969).
- P104.** An Example of  ${}_{\Lambda}^9\text{Li}$  Hypernucleus  
- M.M. Kasim, A. Husain, A.K. Basak, M.M. Rahman, A.S. Mondal, P. Ali and B.C. Saha  
Scientific Researches (Dacca) **7**, 140 (1970)
- P105.** The Lifetime of Heavy Spallation Hyperfragments  
- A. Husain, M.M. Kasim, A.K. Basak, A.S. Mondal, P. Ali and B.C. Saha  
The Nucleus (PAEC, Karachi) **8**, 55 (1971).
- P106.** Study of the Properties of Hyperons and Hyperfragments in Nuclear Emulsion exposed to 3.0 GeV/C Negative K Mesons  
- A. Husain, A.K. Basak, M.H.A. Pramanik and M.P. Ali  
Science and Industry (Karachi) **8**, 180 (1971).
- P107.** Mass estimates of Heavy Hyperfragments Decaying Non-mesonically  
- A.S. Mondal, A.A. Sarder, A.K. Basak, M.M. Kasim and A. Husain  
Nuclear Science and Appl. (AEC, Dacca) **6B**, 9 (1973).
- P108.** A Probable Example of Hypernucleus  ${}^7\text{He}_{\Lambda}$   
- A.S. Mondal, A.A. Sarder, A.K. Basak, M.M. Kasim and A. Husain  
Nuclear Science and Appl.(AEC, Dacca) **7B**, 66 (1974)
- P109.** A Study of Neutron Induced Reaction  ${}^{12}\text{C}(n,n')3\alpha$  at  $E_{\alpha}=12$  MeV  
- L.A. Banu, A.S. Mondal, A.K. Basak, M.M. Kasim, M.M. Haque and A. Husain  
Nuclear Science and Appl.(AEC, Dacca) **14-15**, 29 (1983)
- P110.** A Study on Nuclear Evaporation in Nuclear Emulsion Exposed to 3.0 GeV/C K Mesons  
- M.H. Ahsan, A.S. Mondal, A.K. Basak, M.M. Kasim and A. Husain  
Nuclear Science and Appl.(AEC, Dacca) **17-18**, 32 (1985)

Continued ....

- P111. Effect of Simulated Rainfall at Reproductive to Rippening Stages of the Growth and Yield of Transplant Aman Rice  
- M.S. Islam, M.Z. Haque, M.A. Jabber, A.K. Basak and N.K. Paul  
Ann. Bangladesh Agric. **7(2)**, 105 (1997).
- P112. Study of proton elastic scattering off  $^{56}\text{Fe}$ ,  $^{208}\text{Pb}$  and  $^{58,60,62,64}\text{Ni}$  using the WS and squared WS potentials  
-H.R. Sultana, A.S.B. Tariq, A.F.M.M. Rahman, M.A. Uddin and A.K. Basak  
Nucl.Sc.& Applications, (AEC, Dhaka) **7**, 1 (1998).
- P113. Calculations for Spectroscopic Amplitudes for one-nucleon transfer reactions with three active orbits  
- M. Haque, A. K. Basak, S. K. Das and H. M. Sen Gupta  
Nucl.Sc.& Applications, (AEC, Dhaka), ) **8**, 1 (1999).
- P114. Determination of charge density of nuclei by electron scattering  
- M.A. Uddin, M.R. Goulder, M.K.R. Khan, M. Mozibur Rahman and A. K. Basak .  
Nucl.Sc.& Applications, (AEC, Dhaka), ) **12**, 1 (2003).

Research Papers in Conference Proceedings (Selective)

- P115. Properties of Charged Hyperons and Hyperfragments Emitted from the Interactions of 500 MeV/C Negative K Mesons with Nuclear Emulsion  
- A. Husain, A.K. Basak, G.S. Islam, M. Rahman, K. Banu and M. Haque  
Proc. Peking Science Symp. (1964) **Gen147**, p.1.
- P116. Tensor Analyzing Power of (d,p) Reactions near Coulomb Barrier  
- A.K. Basak, J.A.R. Griffith, M.Irshad, O. Karban, E.J. Ludwig, J.M. Nelson and S. Roman  
Proc.Int.Conf.on Nuclear Physics, Eds. J.de Boer and H.J. Mang (Munich, 1973), p.439.
- P117** Evidence for the Deuteron D-state from (d,p) Reactions  
- A.K. Basak, M. Irshad, O. Karban, J.M. Nelson, S. Roman and G. Tungate  
Proc.Int.Conf.Nucl.Struct. & Spec.,Eds. H.P. Blok and A.E.L. Dieperink (Amsterdam, 1974)  
**Vol.1**, p. 177.
- P118 Elastic and Inelastic Scattering of Polarized Deuterons by  $^{112}\text{Cd}$  and  $^{116}\text{Cd}$   
- A.K. Basak, J.A.R. Griffith, G. Heil, O. Karban, S. Roman and G. Tungate  
Polarization Phen. In Nucl. Phys.(Zurich, 1975), Eds. W. Gruebler and V. Konig, p.741
- P119. Structure of Light Nuclei from Transfer Reactions with Polarized  $^3\text{He}$  Beam  
- O. Karban, A.K. Basak, G.C. Morrison, J.M. Nelson and S. Roman  
Proc.Int.Conf. on Nucl. Structure (Dubna,1976).
- P120  $^3\text{He}$  D-state Effects in (d, $^3\text{He}$ ) Reaction.  
- S. Roman, A.K. Basak, J.B.A. England, J.M. Nelson, N.E. Sanderson, F.D. Santos , A.M. Eiro  
Proc.Int. Conf. Nuclear Structure (Tokyo,1977) p. 635.

Continued .....

- P121. Analyzing Power of ( $^3\text{He},t$ ) Reactions on Light Nuclei  
 - A.K. Basak, O. Karban, P.M. Lewis, G.C. Morrison and S. Roman  
 Polarization Phen.in Nucl. Phys.(Santa Fe, 1980), Eds. G.G. Ohlson et al., p.593
- P122. Application of ( $^3\text{He},d$ ) and ( $^3\text{He},\alpha$ ) Reactions in Nuclear Spectroscopy  
 - O. Karban, A.K. Basak, G.C. Morrison, J.M. Nelson and S. Roman  
 Polarization Phen.in Nucl. Phys.(Santa Fe, 1980), Eds. G.G. Ohlson et al., p.703
- P123. Reaction Mechanism Studies with Polarized  $^3\text{He}$   
 - O. Karban, A.K. Basak and S. Roman  
 Polarization Phen.in Nucl. Phys.(Santa Fe, 1980), Eds. G.G. Ohlson et al., p.1284
- P124. Study of  $^{14}\text{N}$  and  $^{12}\text{C}$  by the Reaction of Polarized  $^3\text{He}$  with  $^{12}\text{C}$   
 - P.V. Drum, A.K. Basak, O. Karban, P.M. Lewis, S. Roman and G.C. Morrison  
 Polarization Phen.in Nucl. Phys.(Santa Fe, 1980), Eds. G.G. Ohlson et al., p.64
- P125. The Elusive Alpha-light Nucleus Potential  
 - F.B. Malik, A.K. Basak, S.K. Das, A.S.B. Tariq and H.M. Sen Gupta  
 Bull. Am. Phys. Soc. **44**, 1408 (1999).
- P126. Electron Impact ionization of He-like system  
 -B. C. Saha, M. A. Uddin and A. K. Basak,  
*Bull Am Phys Soc* **46**, xxx , Tuscan, AZ, June 20-26, 2004.
- P127. Role of Relativistic Effects in the ionization of Heavy Ions by Electron Impacts  
 - B. C. Saha, A. K. Basak and M. A. Uddin  
 36<sup>th</sup> Meetings of the Division of Atomic, Molecular and Optical physics (DAMOP) 2005.
- P128.. Electron impact ionization of Be isoelectronic ions  
 - B. C. Saha, A. K. Basak and M. A. Uddin,  
 5<sup>th</sup> Southern School on Computational Chemistry, Jackson, MS, April (2005).
- P129. Electron impact ionization of two-electron ions  
 - B. C. Saha, A. K. Basak and M. A. Uddin,  
 XXIV Int. Conf. on Photonic, Electronic and Atomic Collisions, Rosario, Argentina, July (2005).
- P130 New method for calculating the electron impact ionization of ions  
 - B. C. Saha, A. K. Basak and M. A. Uddin  
 72 annual meetings of the South Eastern Section of APS (SEAPS), Nov 10-12, 2005.
- P131. Nature of  $\alpha$ - $^{40,44,48}\text{Ca}$  interaction and  $\alpha$ -clustering  
 - M.N.A. Abdullah, A.S.B. Tariq, S.K. das, M.A. Uddin, A.K. Basak, S. Ali, H.m. Sen Gupta and F.B. Malik  
 Presented to Bangladesh Physical Society Conference (Dhaka, 2005) and appeared in Bangladesh J. Physics **2**, 81 (2006).

Continued .....

- P132. Electron Impact Ionization from p-orbital targets  
 - Bidhan C. Saha, Arun K. Basak and M. Alfaz Uddin  
 DAMOP Meeting, American Physical Society (Knoxville, USA, 2006).
- P133. A Universal model for electron impact ionization of K, L and M- shells  
 - F. B. Malik, A. K. F. Haque, M. A. Uddin, A. K. Basak, B. C. Saha and K. R. Karim  
 DAMOP 38<sup>th</sup> meeting , 2007
- P134. “Inner-shell ionization with relativistic corrections by electron impact  
 - B. C. Saha, M. A. R. Patoary, M. A. UDDIN, A. K. F. Haque, A. K. Basak  
 38<sup>th</sup> DAMOP meeting (2007).
- P135. K-shell ionization of neutral targets by electron impact  
 - B. C. Saha, A. K. Basak, M. A. Uddin and M. A. R. Patoary  
 Sunny bell Symposium, Feb. 2008.
- P136. Electron impact K-shell ionization of atomic targets  
 - B. C. Saha, A. K. Basak, M. A. Uddin and M. A. Patoary  
 Abstract 39<sup>th</sup> Annual Meeting of the Division of Atomic, Molecular and Optical Physics (DAMOP),  
 APS meeting, Collegetown, PA, 2008.
- P137. Electron impact K-shell Ionization of Atoms ( $2 < Z < 92$ )  
 - M. A. Patoary, M. A. Uddin, A. K. F. Haque, A. K. Basak, and B. C. Saha,  
 Abstract APS March meeting of APS, 2008.
- P138. Electron Impact ionization of Ionic targets  
 - M. A. R. Patoary, M. A. Uddin, A. K. F. Haque, M. Shahjhan, A. K. Basak,  
 and B. C. Saha  
 49<sup>th</sup> Sanibel Symposium, King and Prince Golf Resort, St. Simons Island, GA, Feb 26, 2009.
- P139. Non-monotonic potential description of alpha-<sup>40</sup>Ca refractive elastic scattering.  
 - M. Shahinur Islam, M. M. Billah, S. Hossain, A. S. B. Tariq, A.K. Basak and F.B. Malik  
 Presented to International Conf. on Adv. Phys. (Shahjalal University of Science and  
 Technology, Bangladesh, 2013).
- P140. Electron impact M-subshell Ionization of Atoms at relativistic energies  
 - A. K. F. Haque, M. A. Uddin, M. A. R. Patoary, A. K. Basak, and B. C. Saha,  
 XXIX Int. Conf. Photonic, Electronic and Atomic collisions (ICPEAC2015), published in J. Phys.  
 Conf Series 635 (2035) 052080.
- P141. Theoretical Electron impact ionization cross sections for atomic and ionic targets for  $E \leq 0$  keV  
 - B. C. Saha, A. K. F. Haque, M. A. R. Patoary, M. A. Uddin and A. K. Basak,  
 Abstract 39<sup>th</sup> Annual Meeting of the Division of Atomic, Molecular and Optical Physics (DAMOP),  
 XXIX Int. Conf. Photonic, Electronic and Atomic collisions (ICPEAC2015), published in J. Phys. Conf  
 Series 635 (2035) 082004.

Continued ....

P142. Non-monotonic nucleus-nucleus potential and incompressibility of infinite cold nuclear matter

- A.K. Basak, M.A. Uddin, S. Hossain and A.S.B. Tariq  
Presented to International Conf. on Adv. Phys. (Rajshahi University, Bangladesh, 2015).

P143. Non-monotonic potential description of the cross section, vector and tensor analyzing powers of the  ${}^6\text{Li}+{}^{12}\text{C}$  elastic scattering at 30 and 50 MeV

- Athoy Nilima, M.M.B. Azad, M.M. Billah, A.S.B. Tariq, S. Hossain, M.A. Uddin, S. Bhattacharjee, M. Azuzur Rahman and A.K. Basak  
Presented to International Conf. on Adv. Phys. (Rajshahi University, Bangladesh, 2015).

P144. Non-monotonic shallow nucleus-nucleus potential for heavy-ion elastic scattering

- M. Sujan Islam, R. Majumder, S. Hossain, Athoy Nilima, M.A. Sayed, M.M. Billah, M.M.B. Azad, A.S.B. Tariq, M.A. Uddin and A.K. Basak  
Presented to International Conf. on Adv. Phys. (Rajshahi University, Bangladesh, 2015).

#### Research Articles as Internal Reports (Selective)

**P145.** Measurements of the Analysing Powers of the  ${}^6\text{Li}(d,\alpha){}^4\text{He}$  Reaction at 12.3 MeV

- A.K. Basak, J.A.R. Griffith, O. Karban, J.M. Nelson and S. Roman  
Ann.Prog.Rept.Nucl. structure Group (Univ. Birmingham, 1975), p.4.

P146. Tensor Polarization Effects in Inelastic Deuteron Scattering

- O. Karban, A.K. Basak, J.A.R. Griffith and G. Tungate  
Ann.Prog.Rept.Nucl. structure Group (Univ. Birmingham, 1976), p.26.

P147. Production of  ${}^5\text{Li}$  in Transfer Reactions with a 33 MeV Polarized  ${}^3\text{He}$  Beam

- O. Karban, A.K. Basak, C.O. Blyth, Y.W. Lui, G.C. Morrison, J.M. Nelson and S. Roman  
Ann.Prog.Rept.Nucl. Structure Group (Univ. Birmingham, 1976), p.61.

P148. Tensor Analyzing Powers in the  ${}^{40}\text{Ca}(d,\alpha){}^{38}\text{K}$  Reaction

- J.M. Nelson, A.K. Basak, O. Karban and S. Roman  
Ann.Prog.Rept.Nucl. structure Group (Univ. Birmingham, 1976), p.65.

P149. Search for Neutral Weak Current in  ${}^6\text{Li}$

- T.C. Rinckel, A.K. Basak, T.R. Donoghue, C. Rolfs and K.E. Sale  
Nucl. Phys. Research Rept.#VDG-014(Ohio State Univ., 1979-81), p.18.

P150. Accelerator Energy Resolution and Accuracy of Calibration

- T.C. Rinckel, A.K. Basak, T.R. Donghue, C. Rolfs and K.E. Sale  
Nucl. Phys. Research Rept.#VDG-014(Ohio State Univ., 1979-81), p.130.

P151. Angular distribution of deuterons when populating highly excited states by the  ${}^{28}\text{Si}({}^6\text{Li},d){}^{32}\text{S}^*$  reaction.

- A. Basak, M. Brenner and I. Thompson  
Biennial Report, ed. T. Lönnroth (Åbo Akademi Press, Turku, Finland, 2003).

Continued .....

- P152. Electron impact L- and M-shell ionization of atoms at relativistic energies  
- A.K.F. Haque, M. Alfaz Uddin, M. Shahjahan, M.R. Talukder, M.N.A. Abdullah and A.K. Basak  
<http://publications.ictp.it> IC/2009/036.
- P153. An empirical formulation for inner-shell ionization of atoms  
- A.K.F. Haque, M.R. Talukder, M. Shahjahan, M. A Uddin and A.K. Basak  
<http://publications.ictp.it> IC/2009/0350.
- P154. Empirical model for electron impact ionization of hydrogen isoelectronic ions  
- A.K.F. Haque, M.R. Talukder, M. A Uddin, M. Shahjahan, A.K. Basak and B.C. Saha  
<http://publications.ictp.it> IC/2010/036.

Article under Review

- P155.  $^{16}\text{O}$ -cluster states in  $^{32}\text{S}$  in non-monotonic nucleus-nucleus potentials  
- A.K. Basak, A.C. Merchant, M. Freer, M. Sujjan Islam, Ragib Absar Ramon et al,  
With Physical Review C Manuscript ID LF17471CR (American Physical Society)
-