

Name: Dr. Ajay Kumar Rai

Nationality: Indian

Designation: Professor

Office address: Department of Physics,
Sardar Vallabhbhai National Institute of Technology
Surat, Gujarat -395007.



Contact: 09904003860,

Email-id: akr@phy.svnit.ac.in, raiajayk@gmail.com

ACADEMIC QUALIFICATIONS:

Sr No.	Examination Passed	Year of Passing	Institution	Subjects
1	Ph. D.	2006	Sardar Patel University, VVNagar, Anand, Gujarat	Particle Physics
2	M. Phil.	2002	Sardar Patel University, VVNagar, Anand, Gujarat	Particle Physics
3	M. Sc.	2000	Gujarat University, Ahmedabad	Nucl. Phys., Quantum Mech., Electronic ...
4	B. Sc.	1998	Gujarat University, Ahmedabad	Physics, Mathematics, Chemistry, English

Title of M. Phil Dissertation: Quark-antiquark structure for the study of Mesons.

Title of the Ph. D. Thesis: Study of light-heavy flavor hadrons.

Ph. D. Supervised: 11 (completed) +08 (working)

- 1) **Dr. N. B. Devlani**
(Title of the thesis 'Study of heavy-light and heavy-heavy flavored mesons')
- 2) **Dr. V. H. Kher**
(Title of the thesis 'Spectroscopy study and Regge trajectories of $Q\bar{q}$ and $Q\bar{Q}$ mesons')
- 3) **Dr. Z. Shah**
(Title of the thesis 'Spectroscopy of heavy flavor baryons')
- 4) **Dr. D. Rathaud**
(Title of the thesis 'Molecular Interpretation of Exotic Hadrons')
- 5) **Dr. R. Chaturvedi**
(Title of the thesis 'Study of quarkonia using effective field theory')
- 6) **Dr. Keval M Gandhi**
(Title of the thesis "Study of Open Charm and Open Bottom Mesons using Heavy Quark Effective Theory")
- 7) **Dr. Vikas Patel**
(Title of the thesis 'Spectroscopy of Heavy Flavoured Mesons')

8) Dr. Rohit Tiwari

(Mass-spectra of Heavy and Light Flavoured Tetraquarks)

9) Ms. Chandni Menapara

(Spectroscopy of Light Flavored Baryons)

10) Ms. Ameer Kakadiya

(Spectroscopic Properties of Heavy Baryons)

11) Ms. Kaushal Purohit

(Eigensolution of the various potentials and its application in different fields)

NPDF Student: - Dr. Dipika B. Patel (Feb.2020-March 2021)

Study of breakup reactions involving weakly bound projectile nuclei
at Coulomb barrier energies

Research Associate: - Dr. Rajni Mittal (Since Feb.2022)

Systematic study of exotic nuclear systems using macro-microscopic and
phenomenological approach

Projects:

- (1) Properties of mesons using QCD inspired models
(funded by DST Govt. Of India SR/FTP/PS-152/2012(total cost. 12,84,000.00),
(Started 24-10-2013 Ended 30-04-2017)s
- (2) Spectroscopic properties of hadrons using potential models
(funded by SVNIT-Surat (R&C)/1488/2013-14, Total cost-6,55,000.00)

Teaching Experience: Professor (Since 26-12-2023)

Associate Professor (since 28-01-2019)

Assistant Professor (20-07-2007 to 27-01-2019)

Department of Physics, Sardar Vallabhbhai National Institute
of Technology, Surat, Gujarat-395 007, India

International Visits:

- 1) The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy,
(22nd – 26th May, 2006)
- 2) Johannes Gutenberg University, Mainz, Germany, (1st – 6th Sept., 2008)
- 3) Florida State University, USA, (29th Nov.–4th Dec, 2009).
- 4) Department of Physics, Complutense University of Madrid, Spain (30th Aug. – 3rd Sept., 2010)
- 5) Department of Physics, Institute of Physics, Jagellonian University Cracow, Poland
(10th June, 2011)
- 6) 15th International Conference on Hadron Spectroscopy (Hadron 2013); Nara, Japan
(4th - 8th Nov, 2013)
- 7) 3rd International Conference on New Frontiers in Physics; Kolymbari, Crete, Greece,
(28th July – 6th Aug., 2014)
- 8) Hadron structure and QCD (27th June – 1st July, 2016), Gatchina, St. Petersburg Russia.
- 9) The 3rd International Conference on Particle Physics and Astrophysics (2nd-5th Oct., 2017)
Moscow, Russia.

List of Publications:

(For more information

<https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=find%20au%20A%20K%20Rai>)

Book Chapter: 1) Z. Shah, and A. K. Rai, "Spectroscopic Study of Baryons", in Quantum Chromodynamic. London, United Kingdom: IntechOpen, 2021 [Online].
doi:10.5772/intechopen.97639

Sr No	Author (s)	Title of Paper	Name of the Journal	Vol. No	Page No	Year
1.	P Jakhad, J Oudichhya, K Gandhi, AK Rai	Identification of newly observed singly charmed baryons using relativistic flux tube model	Physical Review D	108	014011	2023
2.	J. Oudichhya, K. Gandhi, A. K. Rai	Kaon and strangeonium spectrum in Regge phenomenology	Physical Review D	108	014034	2023
3.	Rohit Tiwari, Juhi Oudichhya, Ajay Kumar Rai	Mass-spectra of light-heavy tetraquarks	International Journal of Modern Physics A	Accepted		2023
4.	A Ansari, C Menapara, AK Rai	Singly Charm Baryons with higher order $\mathcal{O}(1/m^2)$ corrections in hCQM: Revisited	International Journal of Modern Physics A	38	2350108	2023
5.	J. Oudichhya, K. Gandhi, A. K. Rai	Investigation of Ω_{ccb} and Ω_{cbb} baryons in Regge phenomenology	Pramana J. Phys.	97	151	2023
6.	V. Patel Chaturvedi, A. K. Rai	Your manuscript entitled Spectroscopic Properties of B and B_s meson using Screened Potential	Indian Journal of Physics	Accepted		2023
7.	KR Purohit, AK Rai, RH Parmar	Spectroscopy of heavy-light mesons (ρ, ω, η) for the linear plus modified Yukawa potential using Nikiforov–Uvarov method	Indian Journal of Physics	Accepted		2023
8.	Rajni, Ashutosh Kaushik, Ajay Kumar Rai, Manoj K. Sharma	Effect of double spin-orbit parameters of spin-orbit strength in reactions involving spherical-prolate, spherical-oblate, oblate-prolate and	Nuclear Physics A	1038	122723	2023

		oblate-oblate configurations				
9.	A Kakadiya, C Menapara, AK Rai	Mass spectroscopy and decay properties of Ξ_{cb} , Ξ_{bb} , baryons	International Journal of Modern Physics A,	38	2341003	2023
10	C. Menapara, A. K. Rai	Mass spectra of singly, doubly, triply light-strange baryons in light of $(1/m^2)$ relativistic correction	International Journal of Modern Physics A,	38	2350053	2023
11	R. Tiwari, A. K. Rai	Mass-Spectroscopy of hidden charm and hidden strange tetraquarks in diquark-antidiquark approach	Few-Body Systems	64	20	2023
12	J. Oudichhya, K. Gandhi, A. K. Rai	Quantum number assignments of light strange baryons in Regge phenomenology	Nuclear Physics A	1035	122658	2023
13	J. Oudichhya, A. K. Rai	Spin-parity identification of newly observed singly charmed baryons in Regge phenomenology	European Physical Journal A	59	123	2023
14	A. Kakadiya, A. K. Rai	Spectroscopic Study of Ω_{cc} , Ω_{cb} and Ω_{bb} Baryons	Few-Body Systems	64	17	2023
15	R. Tiwari, D. P. Rathaud, A. K. Rai	Spectroscopy of all charm tetraquark states	Indian Journal of Physics	97	943	2023
16	A. Kakadiya, Z. Shah, A. K. Rai	Spectroscopy of Ω_{ccc} and Ω_{bbb} baryons	International Journal of Modern Physics A	37	2250225	2022
17	PANDA Collaboration (Dr. A. K. Rai is member of this group)	Technical design report for the endcap disc DIRC	J. Phys. G: Nucl. Part. Phys.	49	120501	2022

18	V. Kher, R. Chaturvedi, N. Devlani, A. K. Rai	Bottomonium spectroscopy using Coulomb plus linear (Cornell) potential	European Physical Journal Plus	137	1	2022
19	K. Gandhi, A. K. Rai	Study of B, Bs mesons using heavy quark effective theory	European Physical Journal C	82	777	2022
20	C. Menapara, A. K. Rai	Spectroscopy of light baryons: Δ resonances	International Journal of Modern Physics A	37	2250177	2022
21	R. Chaturvedi, A. K. Rai	Bc meson spectroscopy motivated by general features of pNRQCD	European Physical Journal A	58	228	2022
22	K. R. Purohit, R. H. Parmar, A. K. Rai	Solution of the modified Yukawa–Kratzer potential under influence of the external fields and its thermodynamic properties	Journal of Mathematical Chemistry	60	1930	2022
23	C. Menapara, A. K. Rai	Spectroscopic study of strangeness= -3 Ω -baryon	Chinese Physics C	46	103102	2022
24	J. Oudichhya, K. Gadhi, A. K. Rai	Mass spectra of Ξ_{cc} , Ξ_{bc} , Ω_{cc} , and Ω_{bc} baryons in Regge phenomenology	Physica Scripta	97	054001	2022
25	K. Purohit, P. Jakhad, A. K. Rai	Quarkonium spectroscopy of the linear plus modified Yukawa potential	Physica Scripta	97	044002	2022
26	A. Kakadiya, Z. Shah, K. Gandhi, A. K. Rai	Spectra and decay properties of Λ_b and Σ_b baryons	Few-Body Syst	63	29	2022
27	J. Oudichhya, K. Gandhi, A. K. Rai	Mass-spectra of singly, doubly, and triply bottom baryons	Physical Review D	104	114027	2021

28	K. R. Purohit, R. H. Parmar, A. K. Rai	Energy and Momentum Eigenspectrum of the Hulthén-screened Cosine Kratzer Potential Using Proper Quantization Rule and SUSYQM Method	Journal of Molecular Modelling	27	358	2021
29	R. Tiwari, D. P. Rathaud, A. K. Rai	Mass-spectroscopy of $[bb][\bar{b}\bar{b}]$ and $[bq][\bar{b}\bar{q}]$ tetraquark states in a diquark–antidiquark formalism	European Physical Journal A	57	289	2021
30	K. Gandhi, A. K. Rai, Z. Shah, A. Kakadiya	Properties of Doubly Heavy Baryons	Universe	7	337	2021
31	V. Patel, K. Gandhi, A. K. Rai	Interpreting Charm-Strange Mesons with a Screened Potential Model	Few-Body Systems	62	68	2021
32	J. Oudichhya, K. Gandhi, A. K. Rai	Ground and Excited state masses of $\Omega_c^0\Omega_{cc}^+$ and Ω_{ccc}^{++} baryons	Physical Review D	103	114030	2021
33	PANDA Collaboration (Dr. A. K. Rai is member of this group)	PANDA Phase One	European Physical Journal A	57	184	2021
34	C. Menapara, A. K. Rai	Spectroscopic investigation of light strange $S=-1$ Λ and Σ and $S=-2$ Ξ baryons	Chinese Physics C	45	063108	2021
35	PANDA Collaboration (Dr. A. K. Rai is member of this group)	The potential of Λ and Ξ^- studies with PANDA at FAIR	European Physical Journal A	57	154	2021
36	PANDA Collaboration (Dr. A. K. Rai is member of this group)	Study of excited Ξ baryons with the PANDA detector	European Physical Journal A	57	149	2021

37	PANDA Collaboration (Dr. A. K. Rai is member of this group)	Feasibility studies for the measurement of time-like proton electromagnetic form factors from $p p^- \rightarrow \mu^+ \mu^-$ at PANDA at FAIR	European Physical Journal A	57	30	2021
38	V. Patel, R. Chaturvedi, A. K. Rai	Spectroscopic properties of D-meson using screened potential	European Physical Journal Plus	136	123	2021
39	K. R. Purohit, R. H. Parmar, A. K. Rai	Bound state solution and thermodynamic properties of the screened cosine Kratzer potential under influence of the magnetic field and Aharonov–Bohm flux field	Annals of Physics	424	168335	2021
40	K. Gandhi, A. K. Rai	Strong decay analysis of excited nonstrange charmed mesons: implications for spectroscopy	European Physical Journal A	57	23	2021
41	C. Menapara, Z. Shah, A. K. Rai	Spectroscopic properties of Δ Baryons	Chinese Physics C	45	023102	2021
42	V. Patel, R. Chaturvedi, A. K. Rai	Spectroscopic properties of D-meson using screened potential	European Physical Journal Plus	136	42	2021
43	R Chaturvedi, A. K. Rai	Charmonium spectroscopy motivated by general features of pNRQCD	International Journal of Theoretical Physics	59	3508-3532	2020
44	K. Gandhi, A. K. Rai	Spectrum of strange singly charmed baryons in the constituent quark model	European Physical Journal Plus	135	213	2020
45	R. Chaturvedi, A. K. Rai, N. R. Soni and J. N. Pandya	Bottomonium spectroscopy motivated by general features of pNRQCD	Journal of Physics G.	47 (11),	115003	2020
46	K. Gandhi, Z. Shah, A. K. Rai	Spectrum of Nonstrange Singly Charmed Baryons in the Constituent Quark Model	International Journal of Theoretical Physics	59 (4)	1129-1156	2020
47	K. R. Purohit, R. H. Parmar, A. K. Rai	Eigensolution and various properties of the screened cosine Kratzer potential in D dimensions via relativistic	European Physical Journal Plus	135	286	2020

		and non-relativistic treatment				
48	PANDA Collaboration (Dr. A. K. Rai is member of this group)	Precision resonance energy scans with PANDA experiment at FAIR: Sensitivity study for width and line-shape measurements of the X (3872)	European Physical Journal A	55	42	2019
49	D. P. Rathaud, A. K. Rai	Interaction and Identification of the Di-Hadronic Molecules	Few Body Systems	60	37	2019
50	Z. Shah, K. Gandhi, A. K. Rai	Spectroscopy of light N^* baryons	Chinese Physics C	43	024106	2019
51	K. Gandhi, Z. Shah, A. K. Rai	Decay properties of singly charmed baryons	European Physical Journal Plus	133	512	2018
52	Z. Shah, A. K. Rai	Mass Spectra of Singly Beauty Ω_b^- Baryon	Few Body Systems	59	112	2018
53	Z. Shah, A. K. Rai	Ground and Excited State Masses of the Ω_{bbc} Baryon	Few Body Systems	59	76	2018
54	V. H. Kher, A. K. Rai	Spectroscopy and decay properties of charmonium	Chinese Physics C	42	083101	2018
55	R. Chaturvedi, A. K. Rai	Mass spectra and decay properties of $c\bar{c}$ meson	European Physical Journal Plus	133	220	2018
56	Z. Shah, A. K. Rai	Spectroscopy of the Ω_{ccb} baryon in the hypercentral constituent quark model	Chinese Physics C	42	053101	2018
57	Z. Shah, A. K. Rai	Masses and Regge trajectories of triply heavy Ω_{ccc} and Ω_{bbb} baryons	European Physical Journal A	53	195	2017
58	D. P. Rathaud, A. K. Rai	Dimesonic states with the heavy-light flavour mesons	European Physical Journal Plus	132	370	2017
59	Z. Shah, A. K. Rai	Excited state mass spectra of doubly heavy Ξ baryons	European Physical Journal C	77	129	2017
60	PANDA Collaboration paper (Dr. A. K. Rai is member)	Feasibility study for the measurement of πN transition distribution amplitudes at PANDA in p^-	Physical Review D	95	32003	2017

	of this group)	$p \rightarrow J/\psi \pi^0$				
61	V. H. Kher, N. Devlani, A. K. Rai	Spectroscopy decay properties and regge trajectories of B and Bc mesons	Chinese Physics C	41	0931015	2017
62	V. H. Kher, N. Devlani, A. K. Rai	Excited states mass spectra decay properties and regge trajectories of charm and charm strange mesons	Chinese Physics C	41	073101	2017
63	K. Thakkar, Z. Shah, A. K. Rai, P. C. Vinodkumar	Excited states mass spectra and regge trajectories of bottom baryons in hypercentral quark models	Nuclear Physics A	965	57	2017
64	Z. Shah, K. Thakkar, A. K. Rai	Excited state mass spectra of doubly heavy baryons	European Physical Journal C	76	530	2016
65	Z. Shah, K. Thakkar, A. K. Rai, P. C. Vinodkumar	Mass spectra and Regge trajectories of, $\Lambda_{c^+}, \Sigma_{c^+}^0, \Xi_{c^+}^0$ and $\Omega_{c^+}^0$ baryons	Chinese physics C	40	123102	2016
66	Z. Shah, K. Thakkar, A. K. Rai, P. C. Vinodkumar	Excited State Mass spectra of Singly Charmed Baryons	European Physical Journal A	52	313	2016
67	PANDA Collaboration paper (Dr. A. K. Rai is member of this group)	Feasibility studies of time-like proton electromagnetic form factors at PANDA at FAIR	European Physical Journal A	52	325	2016
68	PANDA Collaboration (Dr. A. K. Rai is member of this group)	Study of doubly strange systems using stored antiprotons	Nuclear Physics A	954	323	2016
69	D. P. Rathaud, A. K. Rai	Mass spectra of dimesonic states in light flavour sector	Indian Journal of Physics	90	1299	2016
70	A. K. Rai, D. P. Rathaud	The mass spectra and decay properties of dimesonic states, using the Hellmann potential	The European Physical Journal C	75	462	2015
71	PANDA Collaboration (Dr. A. K. Rai is	Experimental access to Transition Distribution Amplitudes with the	European Physical Journal A	51	107	2015

	member of this group)	\bar{P} ANDA experiment at FAIR				
72	J. N. Pandya, N. R. Soni, N. Devlani, A. K. Rai	Decay rates and electromagnetic transitions of heavy quarkonia	Chinese physics C	39	123101	2015
73	N. Devlani, V. Kher, A. K. Rai	Masses and electromagnetic transitions of the Bc mesons	European Physical Journal A	50	1	2014
74	N. Devlani, A. K. Rai	Mass Spectrum and Decay Properties of D Meson	International Journal of Theoretical Physics	52	2196	2013
75	N. Devlani, A. K. Rai	Spectroscopy and decay properties of B and B _s mesons	European Physical Journal A	48	1	2012
76	N. Devlani, A. K. Rai	Spectroscopy and decay properties of the D _s meson	Physical Review D	84	074030	2011
77	A. K. Rai, J. N. Pandya, P. C. Vinodkumar	Decay rates of quarkonia with NRQCD formalism using spectroscopic parameters of potentia	European Physical Journal A	38	77	2008
78	A. K. Rai, B. Patel, P. C. Vinodkumar	Properties of Q anti-Q mesons in non-relativistic QCD formalism	Physical Review C	78	055202	2008
79	B. Patel, A. K. Rai, P. C. Vinodkumar	Masses and magnetic moments of heavy flavour baryons in hyper central model	Journal of Physics G.	35	065001	2008
80	B. Patel, A. K. Rai, P. C. Vinodkumar	Heavy Flavour Baryons in Hyper Central Model	Pramana J. Phys	70	797	2008
81	A. K. Rai, J. N. Pandya, P. C. Vinodkumar	Multiquark states as di-hadronic molecules	Nuclear Physics A	782	406	2007
82	A. K. Rai, P. C. Vinodkumar	Properties of Bc meson	Pramana J. Phys	66	953	2006
83	A. K. Rai, J. N. Pandya, P. C. Vinodkumar	Low-lying di-hadronic states in relativistic harmonic model	Indian Journal of Physics	80	387	2006
84	A. K. Rai, J. N.	Decay rates of quarkonia and	Journal of	31	1453	2005

	Pandya, P. C. Vinodkumar	potential models	Physics G.			
85	A. K. Rai, R. H. Parmar, P. C. Vinodkumar	Masses and decay constants of heavy–light flavour mesons in a variational scheme	Journal of Physics G.	28	2275	2002

International/ National Conference Proceedings

(For more information

<https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=find%20au%20A%20K%20Rai>)

1. Spectroscopic Properties of Light Baryon, C. Menapara and A. K. Rai, EPJ Web of Conferences, 258, 03004 (2022)
2. Magnetic Moments and the Decay Properties of the D and D s Mesons, K. Gandhi *et al.*, XXIII DAE High Energy Physics Symposium, 261, 141 (2021)
3. Mass spectrum of heavy quarkonium for harmonic plus screened Kratzer potential (HSKP) using series expansion method, K. Purohit, A. K. Rai and R. H. Parmar, Proceedings of the DAE Symp. on Nucl. Phys 65, 533 (2021)
4. Mass Spectra and Magnetic Moment of Ξ , A. Kakadiya and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 591 (2021)
5. Ground and Excited state masses of Ω_c baryon, J. Oudichhya, K. Gandhi and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 537 (2021)
6. Quantum number identification of $\Omega_c(3000)_0$ baryon , Z. Shah, K. Gandhi, J. Oudichhya and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 527 (2021)
7. Mass spectroscopy of $\Lambda\Lambda$ and $\Lambda\Lambda$ systems in molecular model, D. P. Rathaud and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 553 (2021)
8. Quarkonia in effective field theory, R. Chaturvedi and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 597 (2021)
9. Spectra of Ω Baryon, C. Menapara and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 529 (2021)
10. The masses and decay constant of Bc meson, V. Patel and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 541 (2021)
11. Mass-spectroscopy of hidden bottom tetraquarks, R. Tiwari, D.P. Rathaud and A. K. Rai, Proceedings of the DAE Symp. on Nucl. Phys 65, 547 (2021)
12. Study of the state Y (4260) in tetraquark model, R. Tiwari, D. P. Rathaud and A.K. Rai, AIP Conf Proc 2220 (1), 140067 (2020)
13. Excited S –wave baryon, K. Gandhi, A. Kakadiya, Z. Shah and A. K.Rai, AIP Conf Proc 2220 (1), 140015 (2020)
14. Computation of decay constant and digluon decay width of Charmonia, R Chaturvedi, *et al.*, AIP Conf Proc 2220 (1), 140048 (2020)
15. Rotational vibrational partition function using attractive radial potential plus class of Yukawa potential, K. R. Purohit, A.K. Rai and R. H. Parmar, AIP Conf Proc 2220 (1), 120004 (2020)
16. Ground state masses of D mesons, V. Patel, K Gandhi, R Chaturvedi, V. Kher, A. K. Rai, AIP Conf Proc 2220 (1), 140028 (2020)
17. Radially and orbitally excited state masses of Δ baryon, C. Menapara, Z. Shah, A. K. Rai, AIP Conf Proc 2220 (1), 140014 (2020)

18. Approximate analytical solution of the extended Hulthen-Yukawa with inverse square and coulombic term plus ring shape potential, R. H. Parmar, K. R. Purohit, A. K. Rai, AIP Conf Proc 2220 (1), 140071 (2020)
19. Spectroscopy of Δ Baryon; C. Menapara and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 64, 673 (2019)
20. Mass spectra of cb -bar meson in framework of pNRQCD; R. Chaturvedi *et al.*, Proceedings of the DAE Symp. on Nucl Phys. 64, 677 (2019)
21. Orbitally excitation of Λ_b^0 baryon; A. Kakadiya, K. Gandhi and A. K. Rai, Proceedings of the DAE Symp. on Nucl Phys. 64, 697 (2019)
22. Decay Constant and Leptonic Branching Fraction of D Meson, V. Patel *et al.* Proceedings of the DAE Symp. on Nucl Phys. 64, 655 (2019)
23. Eigensolution of the modified screened Cornell potential and mass spectroscopy of the charmonium; K. R Purohit, A. K. Rai and R. H. Parmar, Proceedings of the DAE Symp. on Nucl Phys. 64, 661 (2019)
24. Spin-parity assignment of $\Lambda_c(2765)$ baryon, K. Gandhi, A. Kakadiya and A. K. Rai, Proceedings of the DAE Symp. on Nucl Phys. 64, 671 (2019)
25. Study of the state Z4430 in tetraquark model, Rohit Tiwari, D. P. Rathaud, A. K. Rai, Proceedings of the DAE Symp. on Nucl Phys. 64, 675 (2019)
26. Breaking the Neutrino Mass Hierarchy Problem, S. Pincha and A. K. Rai, Proceedings of the DAE Symp. on Nucl Phys. 64, 843 (2019)
27. Revisited: the spectra of doubly heavy Ξ_{cc} baryon, Z. Shah and A. K. Rai, Proceedings of the DAE Symp. on Nucl Phys. 64, 695 (2019)
28. Recent developments in Hadron Spectroscopy, A. K. Rai, Proceedings of the DAE Symp. on Nucl Phys. 64, 910 (2019)
29. Mass spectra of triply heavy charm-beauty baryons; Z. Shah, and A. K. Rai: EPJ Web Conf. 202 (2019) 06001
30. Regge trajectories in the B meson; N. Devlani, V. H. Kher and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 63, 910 (2018)
31. Simulation of $f_0(1710)$ state using PANDARoot; K. Gandhi *et al.*; Proceedings of the DAE Symp. on Nucl Phys. 63, 906 (2018)
32. $B^+ \rightarrow K^+ l^+ l^-$ to probe physics beyond standard model; A. Parmar, S. Dabhani and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 63, 896 (2018)
33. Regge trajectories in the B_c meson; V. H. Kher, N. B. Devlani, and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 63, 884 (2018)
34. N- Δ and Δ - Δ Di-baryonic Molecular Systems; R. Tiwari, D. P. Rathaud and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 63, 860 (2018)
35. $\gamma\gamma$ and ggg decay width of S-wave Charmonia; R. Chaturvedi, N. R. Soni, J. N. Pandya and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 63, 834 (2018)
36. Magnetic properties of $D^*(2007)^0$ and $D^*(2010)^\pm$ meson in the constitute quark model; K. Gandhi, V. Patel, V. Kher and A. K. Rai; Proceedings of the DAE Symp. on Nucl Phys. 63, 824 (2018)
37. Mass spectra of di-baryonic systems in charm sector; Z. Shah, D. P. Rathaud and A. K. Rai; Pos Hadron2017 (2018) 244
38. Mass spectra of triply beauty Ω_{bbb} baryon; Z. Shah and A.K. Rai; Pos Hadron2017 (2018) 068
39. Insights to N(udd) baryon spectra; A. K. Rai, Z. Shah and K. Gandhi; AIP Conf. Proc. 1953 (2018), 140091
40. Orbitally excited spectra and decay of $c\bar{c}$ meson; R. Chaturvedi and A. K. Rai; AIP Conf. Proc. 1953 (2018), 140062

41. $\Sigma_s - \Sigma_s$ as a di-baryonic molecule; D. P. Rathaud and A. K. Rai; AIP Conf. Proc. 1953 (2018), 030100
42. Regge Trajectories of triply heavy baryons; A. K. Rai and Z. Shah; J. Phys. Conf. Ser. 934, 012035 (2017)
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