

List of Publications

Publications in Peer-Reviewed Journals (included in Thesis)

1. **Systematic study of (p, n) and (p, 2n) reactions on ^{110}Cd**
Vibhuti Vashi, Rajnikant Makwana, B. Quintana , M. H. Mehta, R. K. Singh, B. K. Soni, R. Chauhan, S. Mukherjee, M. Abhangi, S. Vala, N. L. Singh, G. B. Patel, S. V. Suryanarayana, B. K. Nayak, S. C. Sharma, T. N. Nag, and Y. Kavun, Radiat. Phys. Chem. **208**, 110933 (2023).
2. **Investigation of (d, 3n) reaction cross section using theoretical nuclear codes calculations on some nuclear materials**
Y. Kavun, **V. Vashi**, and R. Makwana, App. Rad. and Iso. **189**, 110426 (2022).
3. **Cross-section measurement of the $^{114}\text{Cd}(p, \gamma)^{115m}\text{In}$ reaction for nuclear reactor and astrophysical applications**
Vibhuti Vashi, Rajnikant Makwana, B. Quintana , M. H. Mehta, B. K. Soni, S. Mukherjee, R. K. Singh, R. Chauhan, P. M. Prajapati, M. Abhangi, S. Vala, N. L. Singh, G. B. Patel, S. V. Suryanarayana, B. K. Nayak, S. C. Sharma, T. N. Nag, and Y. Kavun, Phys. Rev. C **105**, 044613 (2022).
4. **Measurement of cross sections for flux monitor reactions using quasi-monoenergetic neutrons**
Vibhuti Vashi, Rajnikant Makwana, S. Mukherjee, B. K. Soni, M. H. Mehta, S. Parashari, R. K. Singh, R. Chauhan, S. V. Suryanarayana, B. K. Nayak, S. C. Sharma, H. Naik, N. L. Singh, T. N. Nag, Eur. Phys. J. Plus **136**:746 (2021).

Publications in Proceedings of the National Conferences (included in Thesis)

1. **Measurement of isomeric cross-section at energy of astrophysical interest**
Vibhuti Vashi, R. Makwana, B. Quintana, M. Mehta, S. Mukherjee, B. Soni, M. Abhangi, S. Vala, N. Singh, R. Singh, G. Patel, A. Hingu, S. Suryanarayana, B. Nayak, S. Sharma, T. N. Nag, Proceedings of the DAE Symp. on Nucl. Phys. **65**, 498 (2021).

Other Publications

1. **Theoretical study of $^{109}\text{Ag}(\alpha, n)$ reaction from the threshold up to 20 MeV**
V. R. Vashi, R. J. Makwana, and R. K. Singh, Proceedings of the DAE Symp. on Nucl. Phys. **66**, 607 (2022).
2. **Measurement of reaction cross-section for $^{197}\text{Au}(n, 2n)^{196}\text{Au}$ reaction**
Vibhuti Vashi, R. Makwana, S. Mukherjee, B. Soni, M. H. Mehta, S. Parashari, R.K. Singh, S.V. Suryanarayana, B.K. Nayak, S.C. Sharma, H. Naik, and Tarakanath, Proceedings of the DAE Symp. on Nucl. Phys. **64**, 381 (2019).
3. **Cross-sections for production of ^{115m}In by quasi-monoenergetic neutrons within 7-20 MeV**
Akash Hingu, Bhargav Soni, Siddharth Parashari, Rajnikant Makwana, P.M. Prajapati, **Vibhuti Vashi**, Mayur Mehta, R. Palit, S. V. Suryanarayana, B.K. Nayak, K. Katovsky, S. Mukherjee, Radiat. Phys. Chem. **199**, 110270 (2022).
4. **Experimental and theoretical cross sections of $^{115}\text{In}(n, n')$ reaction at 19 and 16 MeV using quasi-monoenergetic neutrons**
Akash Hingu, Bhargav Soni, S. Mukherjee, Rajnikant Makwana, Siddharth Parashari, **Vibhuti Vashi**, Mayur Mehta, R. Palit, S. V. Suryanarayana, Proceedings of the DAE Symp. on Nucl. Phys. **65**, 357 (2021).
5. **Gamma-ray shielding study of different concrete compositions as a reactor shielding**

Bhargav Soni, Rajnikant Makwana, S. Mukherjee, S. S. Barala, **V. Vashi**, S. Parashari, Rakesh Chauhan, K. Katovsky, Proceedings of the DAE Symp. on Nucl. Phys. **64**, 944 (2019).

6. **Fusion cross-sections for $^{40,48}\text{Ca} + ^{48}\text{Ca}$ reactions using Classical Molecular Dynamics Model**

C. M. Vadagama, **V. R. Vashi**, P. R. Desai, Proceedings of the DAE Symp. on Nucl. Phys. **62**, 488 (2017).