List of Publications

I. Journals:

1. The dynamical cluster-decay model of preformed clusters for hot and rotating \(^{116}\text{Ba}^*\) nucleus produced in low-energy \(^{58}\text{Ni} +^{58}\text{Ni}\) reaction.
   Raj K. Gupta, M. Balasubramanian, Rajesh Kumar, Dalip Singh, Sham K. Arun and Walter Greiner,

2. Cluster in light, heavy, super-heavy and super-superheavy nuclei.
   Raj K. Gupta, Sham K. Arun, Dalip Singh, Raj Kumar, Niyti, S. K. Patra, P. Arumugam and B. K. Sharma,

3. Collective clusterization in hot and rotating nuclei: Preformed-cluster based dynamical cluster-decay model,
   Raj K. Gupta, Sham K. Arun, Dalip Singh, Raj Kumar and Niyti,

4. Fusion-evaporation cross-sections for the \(^{64}\text{Ni} +^{100}\text{Mo}\) reaction using the dynamical cluster decay model.
   Sham K. Arun, Raj Kumar and Raj K. Gupta,

5. \(^{208}\text{Pb}\)-daughter cluster radioactivity and the deformations and orientations of nuclei.
   Sham K. Arun, Raj K. Gupta, BirBikram Singh, Shefali Kanwar and Manoj K. Sharma,

6. Cluster radioactivity with effect of deformations and orientations of nuclei included.
   Sham K. Arun, Raj K. Gupta, Shefali Kanwar, BirBikram Singh and Manoj K. Sharma,

7. Angular momentum effects and barrier modification in sub-barrier fusion reactions using the proximity potential in the Wong formula.
   Raj Kumar, Manie Bansal, Sham K. Arun and Raj K. Gupta,

8. Dynamical cluster-decay model for fusion cross-section below the barrier.
   Raj K. Gupta, Sham K. Arun, Raj Kumar and Manie Bansal,
9. Isospin effects in the decay of $^{114-122}$Ba* nuclei.

**Sham K. Arun** and Raj K. Gupta,
Phys. Rev. C -to be submitted.

10. Fusion-evaporation cross-sections for the $^{64}Ni+^{64}Ni$ reaction using the dynamical cluster decay model.

**Sham K. Arun** and Raj K. Gupta,
Phys. Rev. C -to be submitted.

II. In Proceedings of Symposia and Conferences:

1. Hauser Feshbach statistical model versus dynamical cluster-decay model for hot and rotating $^{116}Ba^*$.  
Dalip Singh, **Sham K. Arun**, M. Balasubramaniam and Raj K. Gupta,  

2. Decay of hot and rotating compound nucleus $^{56}Ni^*$ using the temperature-dependent energy density formalism.  
Dalip Singh, **Sham K. Arun** and Raj K. Gupta,  

3. Excitation functions of compound nucleus $^{164}Yb^*$ formed in $^{64}Ni+^{100}Mo$ reaction.  
**Sham K. Arun** and Raj K. Gupta,  

4. Isospin dependence in the emission of intermediate mass fragments from compound nuclei $^{114-118}Ba^*$.  
**Sham K. Arun** and Raj K. Gupta,  

5. A non-statistical dynamical description of hot and rotating compound nucleus.  
D. Singh, M. Mauhas, **Sham K. Arun**, R. Kumar, N. Sharma and Raj K. Gupta,  
1st Chandigarh Science Congress, Panjab University Chandigarh (India), 225 (2007).

6. Evaporation residue cross-section for heavy and super-heavy nuclei using DCM with deformations and orientations.  
Raj K. Gupta, M. Mauhas and **Sham K. Arun**,  

7. Role of higher multipole deformations and orientations in cluster radioactivity.  
**Sham K. Arun** and Raj K. Gupta,  


15. Dynamical cluster-decay model for the fusion cross-sections below the barrier, Raj K. Gupta, Sham K. Arun, Raj Kumar and M. Bansal, Nucleus-Nucleus collision (NN 2009), Beijing, China, August 16-21, (2009).