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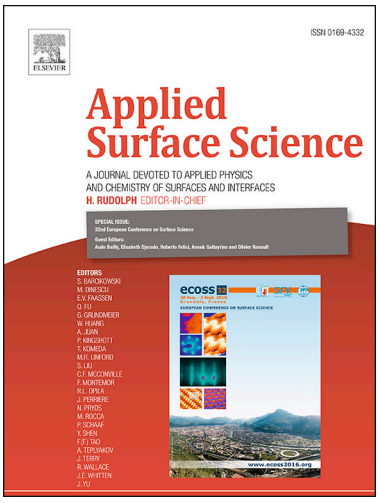

Full Length Article

Surface enthalpy driven size focussing trends: predictive modelling for digestive ripening of spherical particles

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PII: S0169-4332(18)31094-8
DOI: https://doi.org/10.1016/j.apsusc.2018.04.134
Reference: APSUSC 39133

To appear in: *Applied Surface Science*

Received Date: 14 December 2017
Revised Date: 10 April 2018
Accepted Date: 12 April 2018

Please cite this article as: T. Thomas, S. Sethuraman, D. Satyam, D. Kumar, B. Kannadasan, A. Anderson, S. Prashant, R. Vijayakrishnan, S. Khan, P. Das, M. Kumar, K. Bisi, Y. Chinta, B. Talluri, Surface enthalpy driven size focussing trends: predictive modelling for digestive ripening of spherical particles, *Applied Surface Science* (2018), doi: https://doi.org/10.1016/j.apsusc.2018.04.134

Surface enthalpy driven size focussing trends: predictive modelling for digestive ripening of spherical particles

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Abstract:

Through digestive ripening (DR), a polydispersed colloid can be processed to obtain a monodispersed system. Recent advances in DR have rendered the process prospectively scalable, soft-chemical and green. This in turn makes it relevant for industrial-scale manufacturing of nanoparticles (NPs) and quantum dots (QDs); a crucial step forward from a technological standpoint. However predictive models and associated results that offer chemical insights for experimental design for DR are largely missing. Currently two attempts to explain DR are notable: (i) Lee's theory (essentially accounts for surface electrostatic