

Consolidated list of all research publications in reverse chronological order¹⁻¹⁷

1. Bhowmik, D.; Culver, K. S. B.; Liu, T.; Odom, T. W., Resolving Single-Nanoconstruct Dynamics during Targeting and Nontargeting Live-Cell Membrane Interactions. **ACS Nano** **2019**, *13* (12), 13637-13644.
2. Hu, J.; Wang, D.; Bhowmik, D.; Liu, T.; Deng, S.; Knudson, M. P.; Ao, X.; Odom, T. W., Lattice-Resonance Metalenses for Fully Reconfigurable Imaging. **ACS Nano** **2019**, *13* (4), 4613-4620.
3. Choo, P.; Hryn, A. J.; Culver, K. S.; Bhowmik, D.; Hu, J.; Odom, T. W., Wavelength-Dependent Differential Interference Contrast Inversion of Anisotropic Gold Nanoparticles. **J Phys Chem C Nanomater Interfaces** **2018**, *122* (47), 27024-27031.
4. Chandra, B.; Bhowmik, D.; Maity, B. K.; Mote, K. R.; Dhara, D.; Venkatramani, R.; Maiti, S.; Madhu, P. K., Major Reaction Coordinates Linking Transient Amyloid-beta Oligomers to Fibrils Measured at Atomic Level. **Biophys J** **2017**, *113* (4), 805-816.
5. Chandra, B.; Mithu, V. S.; Bhowmik, D.; Das, A. K.; Sahoo, B.; Maiti, S.; Madhu, P. K., Curcumin Dictates Divergent Fates for the Central Salt Bridges in Amyloid-beta40 and Amyloid-beta42. **Biophys J** **2017**, *112* (8), 1597-1608.
6. Adler, J.; Baumann, M.; Voigt, B.; Scheidt, H. A.; Bhowmik, D.; Haupl, T.; Abel, B.; Madhu, P. K.; Balbach, J.; Maiti, S.; Huster, D., A Detailed Analysis of the Morphology of Fibrils of Selectively Mutated Amyloid beta (1-40). **Chemphyschem** **2016**, *17* (17), 2744-53.
7. Chandrakesan, M.; Bhowmik, D.; Sarkar, B.; Abhyankar, R.; Singh, H.; Kallianpur, M.; Dandekar, S. P.; Madhu, P. K.; Maiti, S.; Mithu, V. S., Steric Crowding of the Turn Region Alters the Tertiary Fold of Amyloid-beta18-35 and Makes It Soluble. **J Biol Chem** **2015**, *290* (50), 30099-107.
8. Bhowmik, D.; Mote, K. R.; MacLaughlin, C. M.; Biswas, N.; Chandra, B.; Basu, J. K.; Walker, G. C.; Madhu, P. K.; Maiti, S., Cell-Membrane-Mimicking Lipid-Coated Nanoparticles Confer Raman Enhancement to Membrane Proteins and Reveal Membrane-Attached Amyloid-beta Conformation. **ACS Nano** **2015**, *9* (9), 9070-7.
9. Das, A. K.; Rawat, A.; Bhowmik, D.; Pandit, R.; Huster, D.; Maiti, S., An early folding contact between Phe19 and Leu34 is critical for amyloid-beta oligomer toxicity. **ACS Chem Neurosci** **2015**, *6* (8), 1290-5.
10. Bhowmik, D.; Das, A. K.; Maiti, S., Rapid, cell-free assay for membrane-active forms of amyloid-beta. **Langmuir** **2015**, *31* (14), 4049-53.
11. Sarkar, B.; Mithu, V. S.; Chandra, B.; Mandal, A.; Chandrakesan, M.; Bhowmik, D.; Madhu, P. K.; Maiti, S., Significant Structural Differences between Transient Amyloid-beta Oligomers and Less-Toxic Fibrils in Regions Known To Harbor Familial Alzheimer's Mutations. **Angew Chem Int Ed Engl** **2014**, *53* (27), 6888-92.
12. Mithu, V. S.; Sarkar, B.; Bhowmik, D.; Das, A. K.; Chandrakesan, M.; Maiti, S.; Madhu, P. K., Curcumin alters the salt bridge-containing turn region in amyloid beta(1-42) aggregates. **J Biol Chem** **2014**, *289* (16), 11122-31.

13. Bhowmik, D.; MacLaughlin, C. M.; Chandrakesan, M.; Ramesh, P.; Venkatramani, R.; Walker, G. C.; Maiti, S., pH changes the aggregation propensity of amyloid-beta without altering the monomer conformation. ***Phys Chem Chem Phys*** **2014**, *16* (3), 885-9.
14. Nag, S.; Sarkar, B.; Chandrakesan, M.; Abhyankar, R.; Bhowmik, D.; Kombrabail, M.; Dandekar, S.; Lerner, E.; Haas, E.; Maiti, S., A folding transition underlies the emergence of membrane affinity in amyloid-beta. ***Phys Chem Chem Phys*** **2013**, *15* (44), 19129-33.
15. Chandrakesan, M.; Sarkar, B.; Mithu, V. S.; Abhyankar, R.; Bhowmik, D.; Nag, S.; Sahoo, B.; Shah, R.; Gurav, S.; Banerjee, R.; Dandekar, S.; Jose, J. C.; Sengupta, N.; Madhu, P. K.; Maiti, S., The basic structural motif and major biophysical properties of Amyloid-beta are encoded in the fragment 18-35. ***Chemical Physics*** **2013**, *422*, 80-87.
16. Abhyankar, R.; Sahoo, B.; Singh, N. K.; Meijer, L. M.; Sarkar, B.; Das, A. K.; Nag, S.; Chandrakesan, M.; Bhowmik, D.; Dandekar, S.; Maiti, S., Amyloid diagnostics: Probing protein aggregation and conformation with ultrasensitive fluorescence detection. ***Proc Spie*** **2012**, 8233.
17. Mithu, V. S.; Sarkar, B.; Bhowmik, D.; Chandrakesan, M.; Maiti, S.; Madhu, P. K., Zn(++) binding disrupts the Asp(23)-Lys(28) salt bridge without altering the hairpin-shaped cross-beta Structure of Abeta(42) amyloid aggregates. ***Biophys J*** **2011**, *101* (11), 2825-32.