Prof. S. Thayumanavan

Name : Prof. S. Thayumanavan
Current Affiliation : Professor & Head, Biomedical Engineering, University of Massachusetts Amherst.
Ph.D. : University of Illinois, United States.
Post – Doc : California Institute of Technology, California.
Research Interests :

- Polymer self-assembly
- responsive materials and their use in diverse applications including therapeutic delivery, sensing, and diagnostics.

Website : https://www[dot]umass[dot]edu/chemistry/about/directory/s-thai-thayumanavan
Brief CV :

Dr. S. Thai Thayumanavan is a distinguished chemist and biomedical engineer whose interdisciplinary research covers supramolecular chemistry, polymer science, and targeted bioactive delivery. He earned his B.Sc. and M.Sc. degrees from The American College in Madurai, Tamil Nadu, India, followed by a Ph.D. in organic chemistry from the University of Illinois at Urbana-Champaign in 1996. He then completed postdoctoral research at the California Institute of Technology (Caltech) from 1996 to 1999. His research concentrates on designing stimuli-responsive polymeric assemblies—particularly nanogels and antibody–polymer conjugates—that can respond to specific biological triggers such as pH, redox conditions, or enzymatic activity. These materials enable highly selective and controlled delivery of therapeutic agents like siRNA, proteins, and small-molecule drugs. His group has developed innovative delivery systems, including antibody-directed siRNA constructs and nanogel therapeutics that have demonstrated the ability to reverse obesity in mouse models. Dr. Thayumanavan's work uniquely integrates synthetic chemistry, materials design, and biomedical engineering, significantly advancing precision medicine and disease-specific treatments therapies.

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- Kanitin Khamnong, Vanessa L Stahl, Olivia N Izikson, Anirudh Devarajan, S Thayumanavan, Richard W Vachet, High-Throughput Screening of Amyloid Inhibitors via Covalent-Labeling Mass Spectrometry, Analytical Chemistry, 25 (97),2025,12989–12997.
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