

## Amyloid as functional Bio-materials

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Amyloids are highly ordered cross  $\beta$ -sheet rich protein/peptide aggregates. Although amyloids are known to be associated with various human diseases such as Alzheimer's and Parkinson's, recent studies have suggested that amyloid can perform normal functions of the host organism (functional amyloids). Amyloids are highly stable, resistant against a wide range of harsh physical and chemical conditions. Therefore, they can be utilized for making smart biomaterials for nano-(bio)-technological applications. We demonstrated that irrespective of sequence and structure, amyloids can serve as a substrate for cell adhesion. The hydrogel composed of amyloid fibrils is an excellent material for 3D cell culture and stem cell differentiation to neurons raising exciting possibilities for stem cell therapy for disorders like Parkinson's. Moreover, amyloid-based hydrogels can be used for high throughput tumor spheroid modeling (drug screening and personalized medicine) as well as for drug delivery applications.

# Department of Chemistry

## Webinar on “Amyloid as Functional Bio-materials”



**Speaker:** Prof. Samir K Maji, IIT  
Bombay

**On 28<sup>th</sup> August, 2021 at 3 pm**

*Link to join the lecture: [meet.google.com/ino-gcsz-tfe](https://meet.google.com/ino-gcsz-tfe)*

*All are cordially invited to attend the webinar*