Advanced Materials for Incorporating Immobilised Enzymes: Preparation, Processes and Applications in Chemical Catalysis

A privately held, US headquartered, multinational materials science company (> $4B revenue) focused on discovery and product innovation is seeking materials and processes for the immobilisation of enzymes used for catalysis. In particular, our client is looking for methods to manipulate the material properties, reactor configurations and reaction process conditions to increase the activity, selectivity, durability and/or recyclability of immobilised enzyme catalysts.

Approaches of Interest:

- Centres of Excellence in preparing and characterising immobilised enzyme biocatalysts
- Research groups developing novel porous materials (organic or inorganic chemistries) for enzyme immobilisation
- Research groups developing novel immobilisation strategies that enhance the activity, selectivity, durability and/or recyclability of immobilised enzyme biocatalysts
- Technologies that can reduce or remove the barriers to commercialisation of immobilised enzyme bioreactors
- Expertise in understanding enzyme-support interactions relevant to biocatalytic systems
- Groups developing novel reactor schemes to leverage biocatalysts immobilised on structured supports (e.g., monoliths, membranes, etc)
- Key opinion leaders in industrial biotechnology that can speak to the TRL of technologies like mentioned above and what barriers to commercialisation exist
- Applications in specialty chemicals, natural products and green chemistry are preferred

Out of Scope:

- Technologies focused on the development of immobilised enzymes for drug delivery or analytical applications such as biosensors
- Technologies aimed at enzyme engineering or de novo enzyme design

Stages of Development:

Technology readiness level at TRL 2 and above is of interest

Submission Information:

Submission of one page, 200-300 word briefs are encouraged, along with any optional supplementary information e.g., relevant publications and patents. In submitting to this campaign, you confirm that your submission contains only non-confidential information.

Opportunity for Collaboration:

Our client is open to a range of collaboration opportunities, with the most appropriate outcome being decided on a case-by-case basis. Example outcomes include consulting agreements, project funding, and research collaborations.