“*Frontiers in Science*” Lecture (Chemistry 5)

Prof. Sheikh Muhammad Ibrahim

Najran University, Saudi Arabia

Title : Protein-based biomaterials in current age
1. Biomaterials in life science
2. Biomaterials in Industry

Date & Time : October 27 and November 4, 2025,
13:15～14:45

Venue : G310 Meeting Room

Lecture Contents: As the world approaches a new era of technology and innovation, chemical methods are being replaced with superior biochemical techniques that produce new nano-biomaterials based on proteins and other biomacromolecules. Research concludes that soon our day-to-day activities, that are governed by some kind of chemicals/molecules, will be replaced by new generations of biomolecules and biomaterials. For more selective and effective therapeutic application, protein-based nanomaterials are addressed for cancer treatment, nanomedicine and drug delivery. In the field of material science, it’s replacing with new kinds of materials such as bio-sensor, bioelectric devices etc. Additionally, in energy, it is used as energy storage, energy converter and light harvesting. Lastly, protein-based nanoparticles are showing promising results in the field of biocatalyst. Therefore, the course will briefly discuss a new topic on the application of protein-based biomaterials in current age and will open the door for future specialization in the field of advanced nano-bio-materials.

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