



AVIT
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY

DEPARTMENT OF BIOMEDICAL ENGINEERING

REPORT

Webinar on the topic “Advancement in Bionanomaterials” held on 29.10.2020.

Biomaterial

Any material of natural or of synthetic origin that comes in contact with tissue, blood or biological fluids, and intended for use in prosthetic, diagnostic, therapeutic or storage applications without adversely affecting the living organism

METALS
COMPOSITES
CERAMICS **POLYMERS**

Finger joint	Breast implant	Heart valve
Hip joint	Artificial heart	Intraocular lens (IOL)

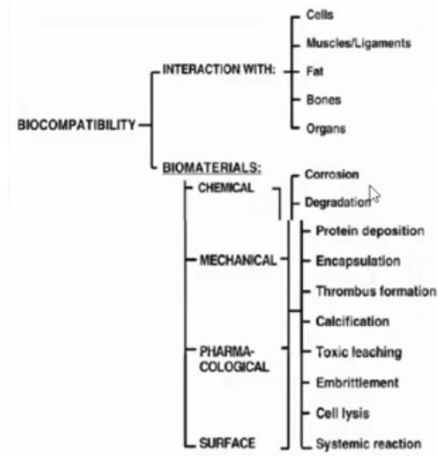
The Department of Biomedical Engineering conducted a Webinar to faculty member and students on the topic “**ADVANCEMENT IN BIONANOMATERIALS**” on 29.10.2020.

The guest speaker **Dr.R.Narayanan**, Associate Professor (Sr), Vellore Institute of Technology (VIT), Chennai have brought lot of insights and research on the recent trends involved in Bionanomaterial and also novel materials for synthesis of implants. He also discussed about various types of ferrous alloys used for bionanomaterials. He also informed the advancement and necessity for Titanium alloys and an alternative material of implant replacements. Many composite materials with respect to strength and stiffness including Fibers, Resins and other typical materials are also discussed.

This webinar also covered the various aspects for Surface roughness, Surface Chemical state, Surface biological state for many bio compatible materials including mechanical, physical, chemical and biological characteristics.

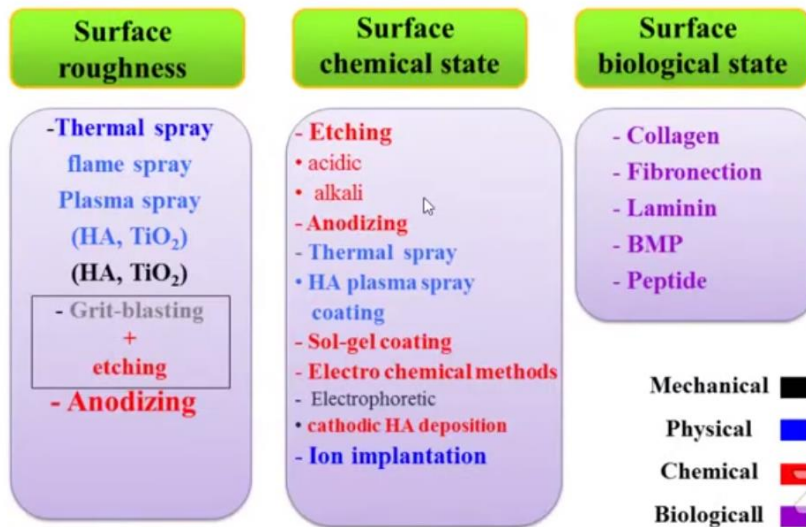
Biocompatibility Requirements

- — Acute systemic toxicity
- — Cytotoxicity
- — Hemolysis
- — Intravenous toxicity
- — Mutagenicity
- — Oral toxicity
- — Pyrogenicity
- — Sensitization



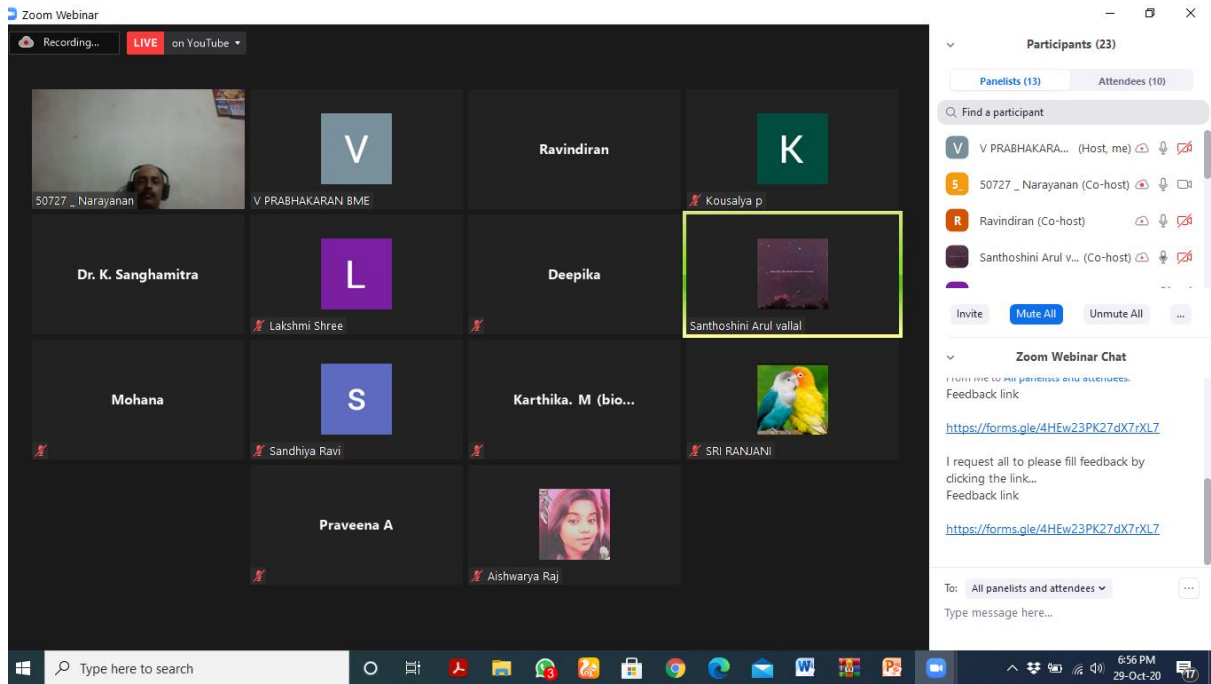
Dr. R.Narayanan

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Finally, the webinar is ended with a formal vote of thanks and feedback also received from various participants for quality improvements.