



**VINAYAKA MISSION'S
RESEARCH FOUNDATION**
(Deemed to be University under section 3 of the UGC Act 1956)



AVIT
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY

AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY
(OLD MAHABALIPURAM ROAD VINAYAKA NAGAR, PAIYANOUR, CHENNAI, TAMIL NADU 603104)

CENTRE FOR NANOTECHNOLOGY RESEARCH



CONSULTANCY SERVICES AND SKILL BASED TRAINING

We are providing the consultancy services and skill based training in the area of nanomaterials synthesis and their characterization

E-Mail : nanoconsultancy@avit.ac.in

Visit Us @ www.avit.ac.in

AREAS OF CONSULTANCY SERVICES

1

SYNTHESIS OF NANOMATERIALS

- Sol-gel Method
- Hydro-thermal method
- Green-Synthesis method
- Spin-coating process

2

FABRICATION OF NANOSTRUCTURES

- Chemical corrosion
- Materials processing – Materials hardening by thermal quenching
- Materials processing – Crystallization, defects recovery by thermal annealing

3

MATERIALS CHARACTERIZATION

- UV-Vis spectrophotometer (UV-Vis 2600, Shimadzu make) – absorption/emission spectra of liquid samples from 220 to 1400 nm.
- Fourier transform infra-red spectroscopy (FTIR and FTIR – ATR mode)
- Atomic Force Microscope (AFM)
- Characterisation of electrode surfaces using electrochemical work station

4

TRAINING

We are conducting skill based training to students, faculties from academic institutions and industries who are interested to learn Nanotechnology field under the consultancy services. The training events are scheduled in May and December.

FACILITIES

Click here to view the facilities List and brief description about the Facilities

[https://www.avit.ac.in/researchcenters/Web%20design%20about%20CNR%20\(AVIT\)-%20\(25%20Feb%202019\).pdf](https://www.avit.ac.in/researchcenters/Web%20design%20about%20CNR%20(AVIT)-%20(25%20Feb%202019).pdf)

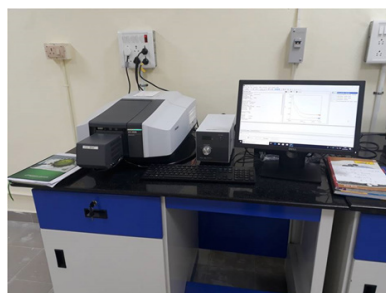
CENTRE FOR NANOTECHNOLOGY RESEARCH

DEPARTMENT OF HUMANITIES AND SCIENCES



Nanomaterials Synthesis
Laboratory - Phase I

Nanomaterials Synthesis
Laboratory - Phase II
(Furnace, Fume hood, Spin
coating Unit)



Characterisation Facility :
UV - Vis spectrometer (Shimadzu)



Characterisation Facility - Fourier Transform
Infra-red spectrometer (Shimadzu)



Atomic Force Microscopy
set-up (Park XE7)



Nanotechnology Laboratory
for skill based Training



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APPROVED BY AICTE



ACCREDITED BY NAAC



RECOGNIZED BY DSIR

DEPARTMENT OF HUMANITIES AND SCIENCES CENTRE FOR NANOTECHNOLOGY RESEARCH

REQUISITION FORM

for UV-Vis Spec. / Fourier Transform Infrared spectrometer / Atomic Force Microscopy /
Electrochemical workstation / Synthesis of nanomaterials by Sol-gel, Hydro-thermal, spin coating, green synthesis /
Materials processing by thermal annealing and quenching in the temperature range between 300 and 1200 K

Name : _____ **Date** : _____

Designation : _____ **Bill No** : _____

Department : _____

Name of University / Institution / Industries : _____

Email ID & Contact Number : _____

Type of Analysis : _____

Number of Samples : _____ **(Returnable / Non Returnable)**

Details of samples (Foil/Film/Powder/Crystal) :
(Please indicate the precautions,
if toxic or hazardous)

Total Amount : _____

Payment Mode : **DD (In Favour of Aarupadai Veedu Institute of Technology, Paiyanoor)**

Name of the Bank / DD number & Date : _____

Signature of the Guide / Head

Signature of the User

Note : Please bring previous literatures, if available,

For AFM samples : Sample surface should be flat and polished
Size : Should below 1×1 cm²
For UV-Vis spectroscopy : only Liquid samples
For FTIR : Liquid/power or thin film samples
For Electrochemistry experiments: Electrodes with conducting terminals

The user may acknowledge
“Centre for Nanotechnology Research, Aarupadai Veedu Institute of Technology,
Vinayaka Missions Research Foundation for any kind of publications.

FOR OFFICE USE

Name of the Operator : _____ **Date Completed** : _____

Signature of the Operator: _____ **Forwarded by** : _____

CONSULTANCY CHARGES FOR NANOMATERIALS SYNTHESIS, SAMPLE CHARACTERISATION AND SKILL BASED TRAINING

Contact Person: Dr R. N. Viswanath, Co-ordinator,
Centre for Nanotechnology Research, Department of H & S, AVIT.
Mobile: (+91) 9362625622, (+91) 8754 541 026 (office)
e.mail: nanoconsultancy@avit.ac.in, rnviswanath@avit.ac.in

Part A : Synthesis and Processing of bulk and Nanomaterials

Synthesis of Nanomaterials (oxides, ceramics and composites)	CONCESSIONAL CHARGES		
	Students and Scholars	Scientists and Faculties from other institutions	Industry
	Amount in Indian Rs.	Amount in Indian Rs.	Amount in Rs.
Sol-gel synthesis (for one sample)	500	600	750
Hydro-thermal Synthesis (for one sample)	500	600	750
Co-precipitation method (for one sample)	500	600	750
Green synthesis of nanomaterials (for one sample)	500	600	750
Materials Processing: Annealing of oxide up to 1200 K for 6 h	300	400	600
Materials Processing: Temperature Quenching up to 1200 K (in air)	400	500	700
Oxide layer deposition by spin coating	300	400	600

Part B : Characterisation Facilities

Characterisation Type		CONCESSIONAL CHARGES		
		Students and Scholars	Scientists and Faculties from other institutions	Industry
		Amount in Indian Rs.	Amount in Indian Rs.	Amount in Rs.
UV-Visible Spectrometer (2600, Shimadzu)	Liquid samples - % of absorption / Transmission	200	300	500
	Liquid samples - Photometric method – concentration of unknown samples	200	300	500

Characterisation Type		CONCESSIONAL CHARGES		
		Students and Scholars	Scientists and Faculties from other institutions	Industry
		Amount in Indian Rs.	Amount in Indian Rs.	Amount in Rs.
Fourier Transform Infra-red spectrometer FTIR	Conventional method (solid / liquid samples)	300	400	600
	ATR mode (thin films/ solid/liquid samples)	300	400	600
Scanning probe Microscopy Atomic Force Microscope (AFM) – Topographic images on a planar polished surfaces		1800	2000	2500
Electro chemical Workstation	Potentiostat measurements CV, I vs E measurements	200	300	400
	Galvanostat measurements V vs Time	200	300	400
	Impedance measurements	200	300	400

Part C : Skill based Training (Tutorials and Lab work) - Participation and Merit Certificates will be issued by the authorities)

Synthesis of Nanomaterials by chemical methods and materials processing (for one week – Three working days)	Training Scheme	Students and Scholars	Scientists and Faculties from other institutions	Industry
	Batch 01 : In the month of May	750	1000	1200
	Batch 02 : In the month of December	750	1000	1200
Characterisation of Nanomaterials (Three working Days)	UV-Vis Spectroscopy	1000	1200	1500
	Fourier Transform Infrared Spectroscopy (FTIR)			
	Scanning Probe Microscopy – Atomic Force Microscope)			
Characterisation of solid surfaces – (Two working days)	Electrochemistry – principles and practice	500	750	1000



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Old Mahabalipuram Road Vinayaka Nagar,
Paiyanoor, Chennai, Tamil Nadu 603104

Mobile: (+91) 9362625622, (+91) 8754 541 026 (office)
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