



Pre-requisites for AFM Imaging

AFM imaging requires that

- => Substrate should be clean.
- => The particles to be rigidly adhered to a substrate.
- => The particles to be dispersed on the substrate.
- => The substrate roughness should be less than the size of the nano-particles.

Ideal substrates for sampling

Sampling is the procedure to deposit the analyte on substrate which is a clean flat stable surface

Substrate types

- => Quartz.
- => Mica.
- => HOPG (Highly oriented pyrolytic graphite).
- => Si (100) (n/p type).
- => Au (1 1 1).

Ideal methods for sampling

- => Drop casting.
- => Spin coating.
- => Layer-by-layer method.

Note: After sampling user should do the overnight drying in vacuum and should preserve the sample in dust free environment. If your particle is not adhered to substrate, you can use adhesive materials like poly-lysine, Poly ethyleneimide, Aminopropyltriethoxysilane and make sure it's not detachable from substrate.

(Any common procedure other than the above has to be discussed with the operator)

Particles of maximum area 1 micron size,

Minimum area 100nm²

Height (/surface roughness) of sample 2-50nm can be analyzed.

Analysis Request Form (Internal)
INDIAN INSTITUTE OF TECHNOLOGYMADRAS
DEPARTMENT OF CHEMISTRY
CHENNAI-36

Job Requisition form for AFM analysis

Name:		M.Sc/M.Tech/Ph.D/Project
Department:		Email:
Guide:		Tel:

Sample Code	Sample type & Composition	Substrate	Imaging mode: (Contact/Non-Contact/conductive probe)

Date

Signature of Research Supervisor

For laboratory use

DD. No. and Date	Date of submission	Completed on

Analysis Request Form (External)
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