

RESUME

Personal Information

Name- Dr. Pragya Tripathi
Date of Birth-
Email-
Marital Status- Single
Language Known- English (Full proficiency), Spanish (Basic), Hindi (Native)
Nationality- INDIAN
Mobile. No -
Mothers Name-
Fathers Name-

Academic Qualification & Professional Experience (Reverse chronological order)

Descrizione del titolo - Assegnista di Ricerca (Identification code: 01)

Working as “Assegnista di Ricerca,” I was involved in the project named “Spettroscopia dielettrica locale tramite microscopia a forza atomica a contatto intermittente”. The aim of the project is to explore the capability of improvement of the spatial resolution and the frequency range of Local Dielectric Spectroscopy (LDS) technique. This possibility was investigated by employing the Intermittent contact mode of the Atomic Force Microscope (AFM), the apparatus named LDS, a peculiar method, not yet exploited for the present purpose, named “constant-excitation frequency-modulation.” Local Dielectric Spectroscopy (LDS) is a special spectroscopy technique that gives the possibility to measure relaxation dynamics in ultra-thin films with high spatial resolution. The main application is the measurement of the dielectric response of self-assembled or nanocomposite polymer thin films, when nanometer-scale structuring is present, and at temperatures close to the glass transition.

Scientific Instruments used- AFM based Local Dielectric Spectroscopy

Protocollo-IPCF-AR-005-2019-PI Prot. AMMCEN n.0077450

Date- 7th November 2019

Rilasciato da- CNR-IPCF

Periodo di attività dal- 16 March 2020

al- 15 March 2021

Descrizione del titolo - Post doctorate (Identification code: 02)

During my postdoctoral studies I worked with polymer thin films confined at nano-scale level (less than 100nm) strongly deviate from macroscopic sample, Shift in phase transition temperature, impressive increase in elastic moduli, stable amorphous compounds. Thin films were prepared by spin coating of diluted polymer chains in chloroform or toluene. The film thickness was controlled by varying the concentration of the polymer chains in the solution and measured by using ellipsometry. An optical Instrument is used to analyze the film thickness after temperature scanning by dielectric spectroscopy.

Scientific Instruments used- Dielectric Spectroscopy, Spin Coater, Vapour deposition system, optical Instrument, Ellipsometer

- ❖ **Filtering effects (P4CIS, P2CIS, and P4CIS long chains)** - Impact of sample preparation is found on glassy dynamics of poly (4chlorostyrene) thin films. Samples were obtained by spin coating, which consists of pouring dilute polymer solutions onto a plate rotating at a high rate. Our experimental results demonstrate that filtering solutions before spin coating affects the value of the segmental relaxation time of as-prepared films. Thin polymer layers obtained via filtered solutions show