

Movie 1

Title: Temperature variation affecting the formed clusters in 7CB/35%Gold system.

Caption: Movie of atomic force microscopy (AFM) images taken on a 7CB Liquid crystal material doped with 35% gold over approximately one hour as the sample was slowly heated from -10°C to 4°C then cooled back down to 0°C.

Key words: liquid crystal, temperature variation, 7CB doped with 35% gold, Atomic force microscopy, AFM, ac mode, tapping mode, heating, cooling, stage.

Movie 2

Title: Melting and crystallization of 6CB/2%Gold system.

Caption: Movie of the amplitude and phase channels of atomic force microscopy (AFM) images of a 6CB liquid crystal doped with 2% gold: melting then re-crystallizing. Before imaging, the sample was initially heated to 75°C then cooled to -10°C. During capture of the movie images, the temperature was raised to 10°C, then cooled back to -10°C. Note the facets forming in the amplitude image during cooling.

Key words: liquid crystal, temperature variation, 6CB doped with 2% gold, Atomic force microscopy, AFM, dual ac mode, tapping mode, heating, cooling, stage.

Movie 3

Title: Melting and crystallization of 6CB/2%Gold system-Dual AC mode.

Caption: Movie of the amplitude and phase channels of dual AC mode atomic force microscopy (AFM) images of a 6CB liquid crystal doped with 2% gold: melting then re-crystallizing. Before imaging, the sample was initially heated to 75°C then cooled to -10°C. During capture of the movie images, the temperature was raised to 10°C, then cooled back to -10°C. Note the facets forming in the amplitude image during cooling.

Key words: liquid crystal, temperature variation, 6CB doped with 2% gold, Atomic force microscopy, AFM, dual ac mode, tapping mode, heating, cooling, stage.