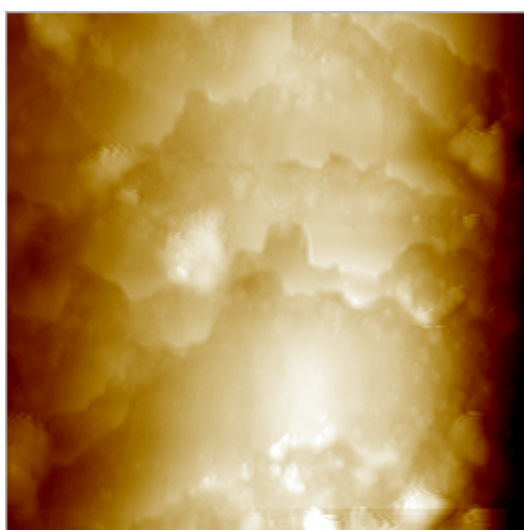


Human Hair

Nanosurf - Application Note No. 00193

The study of human hair surface is of great interest for the cosmetic science. The hair surface structure is important for the diffusion of compounds, such as cosmetic products. Polymers are usually used in hair cosmetics for the improvement of the hair surface. They adhere to the hair surface by van der Waals type forces. Several techniques have been proposed for the evaluation of the morphologic changes in the hair surface after treatments with solutions containing polymers [1-3]. Among the most used ones is AFM.



The measurements on has been performed with an easyScan2 Large Scan AFM operated in dynamic mode.

The surface of the hair and its distinctive structure is clearly visible.

40 μ m x 40 μ m scan range; 3 μ m z range

[1] Robbins, C.R. Chemical and Physical Behavior of Human Hair, SPRINGER - Ed. Verlag, 3rd ed, p. 391, 1994.

[2] Ruetsch, S.B.; Kamath, Y.; Weigmann, H.D. Photodegradation of Human Hair: An SEM Study Journal Cosmetology Science, v. 51, p. 103-125, 2000.

[3] Goddard, E.D.; Schmitt, R.L. Atomic force microscopy investigation into adsorption of cationic polymers, Cosmetic & Toiletries, v. 109, p. 55-61, 1994.