



# Au(111) cu planaritate atomica pentru analize biomoleculare prin microscopia de baleiaj cu efect tunel

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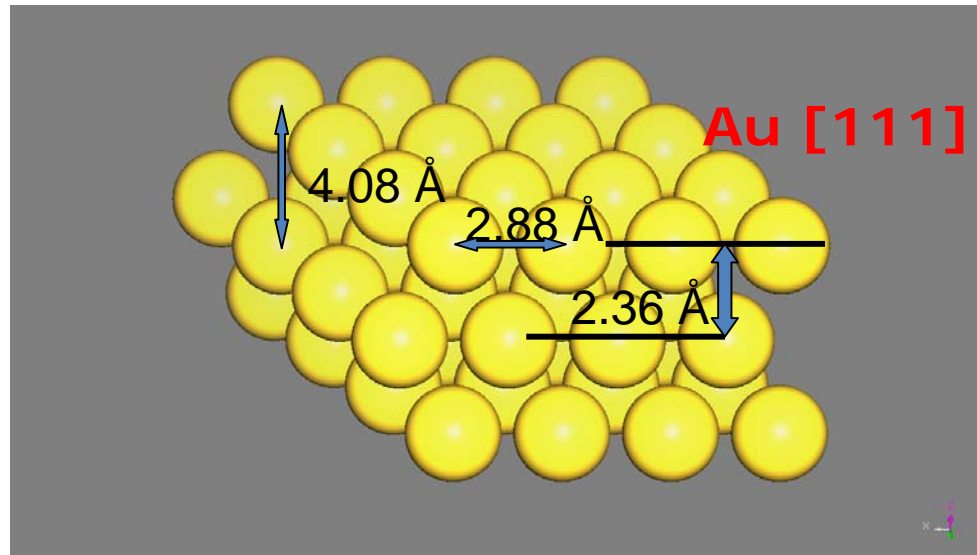
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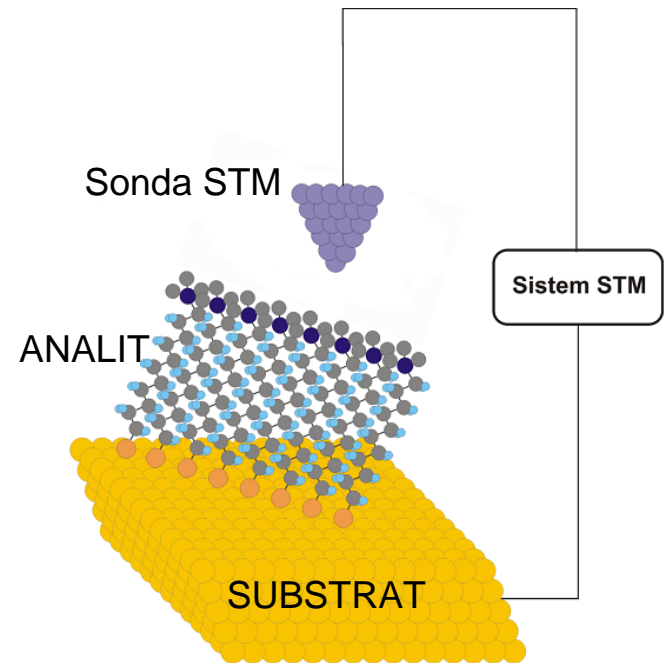
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<http://images.businessweek.com/ss/05/12/bestproducts/source/17.htm>

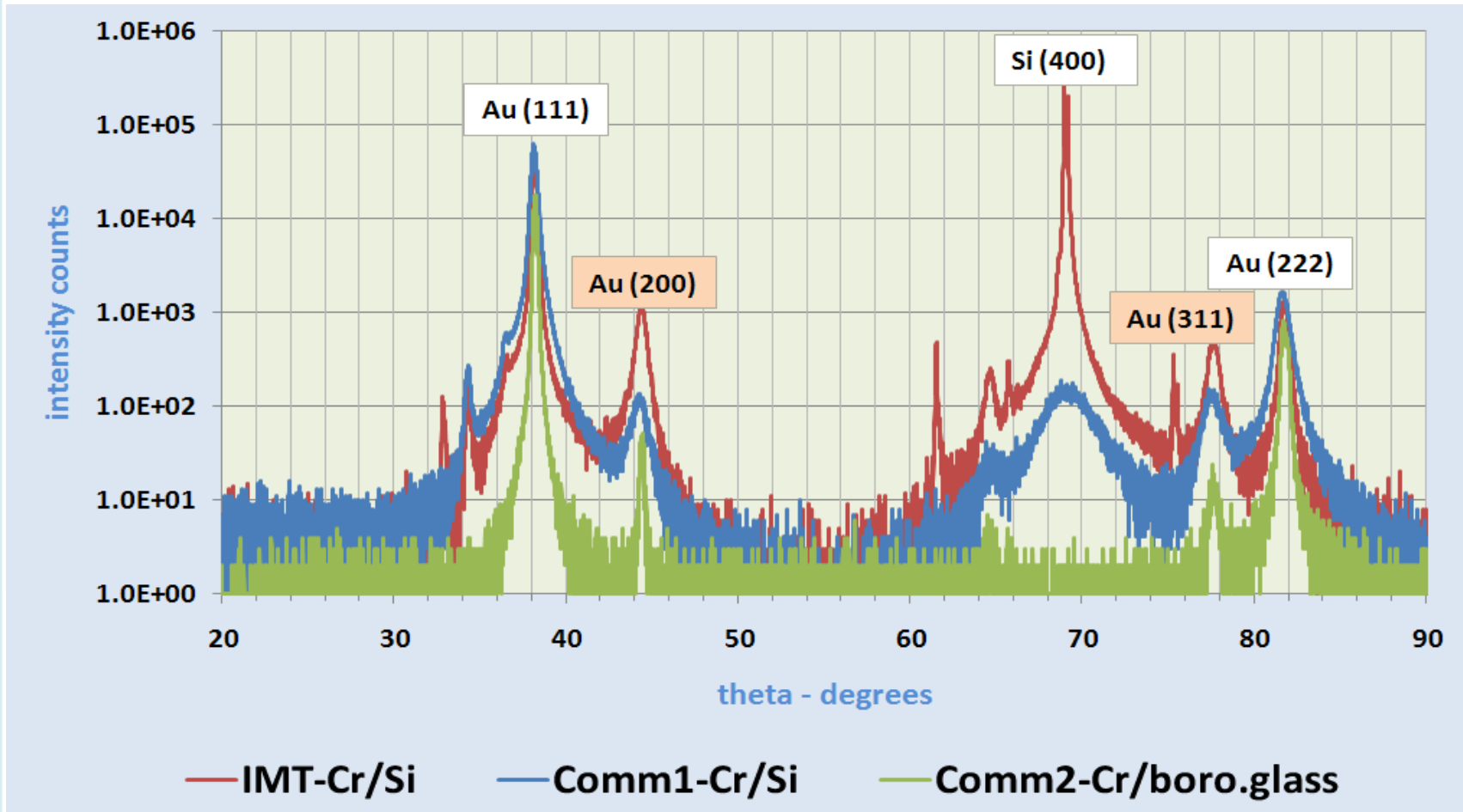


## Planaritate atomica



# Difractometrie de raze X (XRD)- [1]

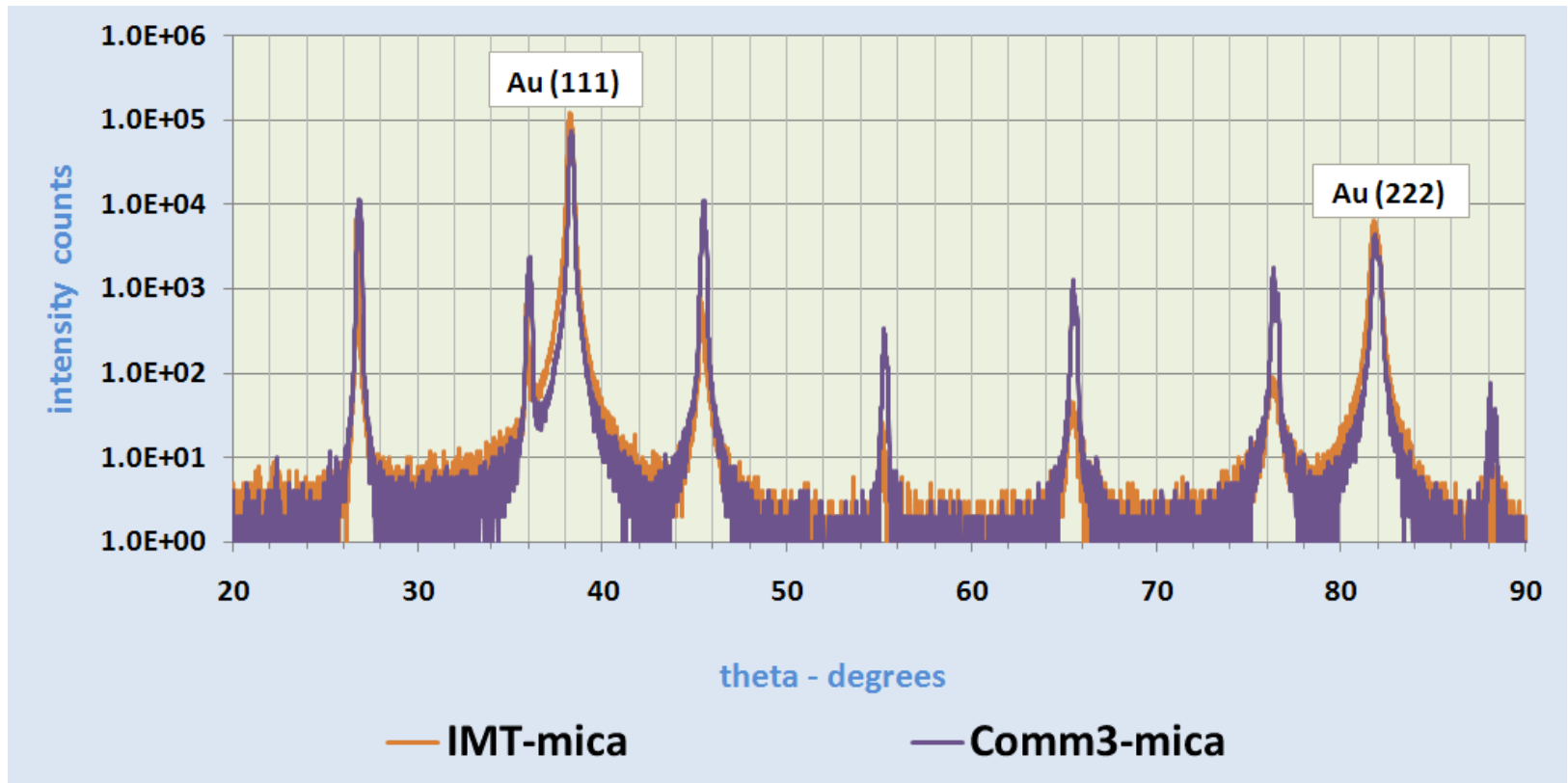
-Echipament: X-Ray Diffractometer, **SmartLab** (Rigaku Corp., Japan) -





# Diffractometrie de raze X - [1]

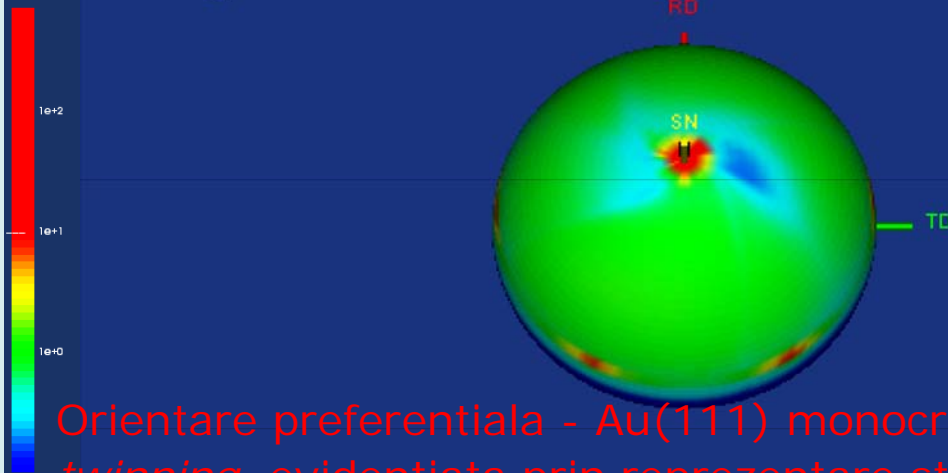
-Echipament: X-Ray Diffractometer, **SmartLab** (Rigaku Corp., Japan) -



		Substrat	Grosime Au
IMT-Si	IMT-Cr/Si	10nm-Cr/330um-Si	100nm
SPI-Si	Comm1-Cr/Si	10nm-Cr/525um-Si	100nm
Arrandee	Comm2-Cr/boro.glass	2.5nm-Cr/700um-Si	250nm
Phasis	Comm3-mica	75um-mica	200nm
SPI-mica	Comm1-mica	50um-mica	150nm
IMT-mica	IMT-mica	75um-mica	150nm

# Difractometrie de raze X - [2]

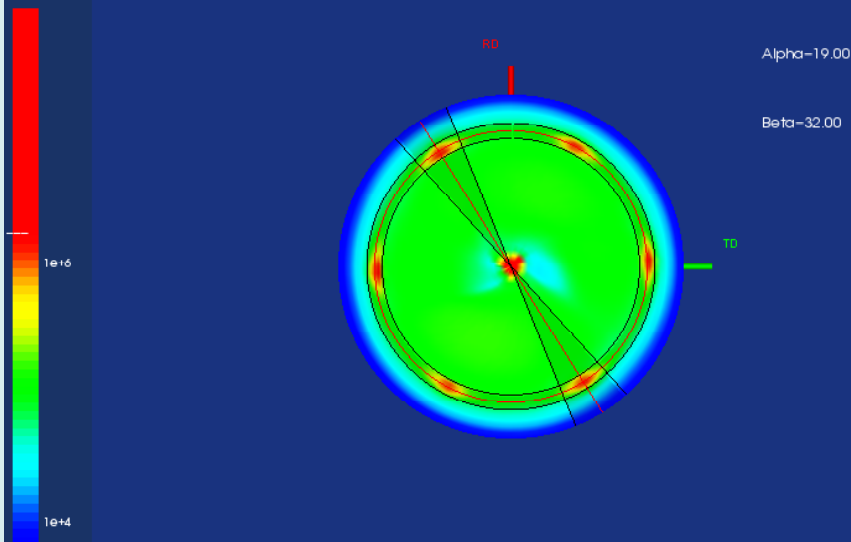
## Pole Figure



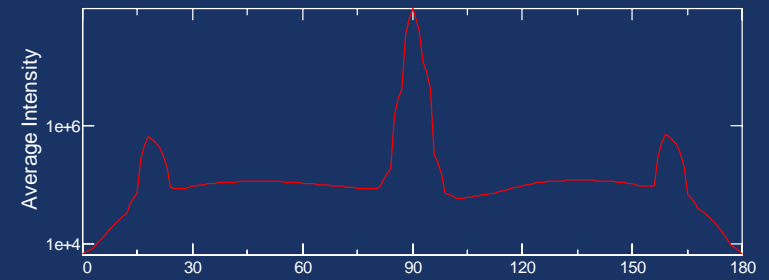
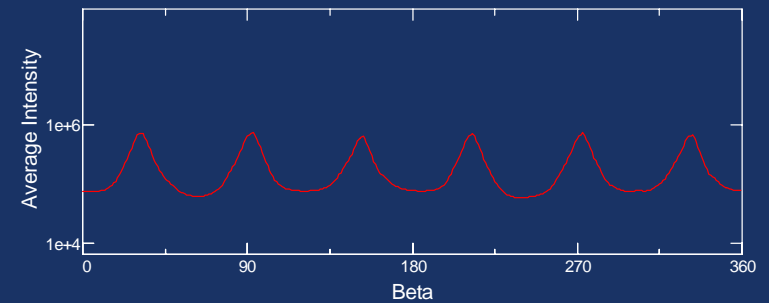
**Figuri  
de  
poli**

Orientare preferentiala - Au(111) monocristal-cu spoturi de *twinning*, evidentiata prin reprezentare stereografica

## Projection

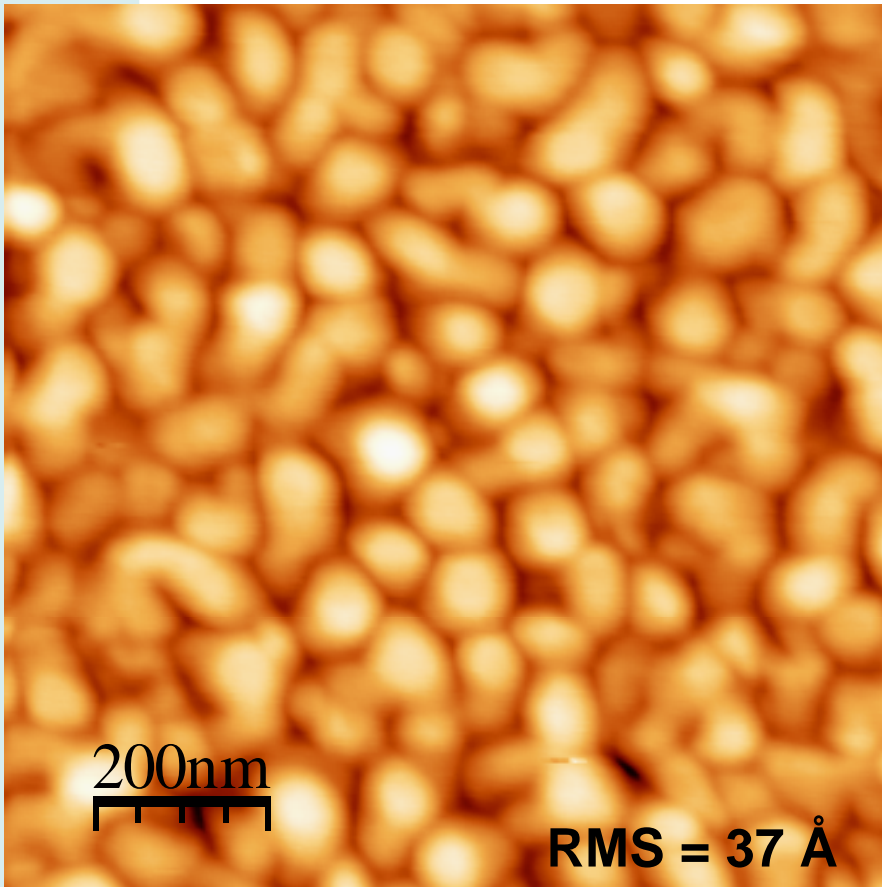


## Cut Circle

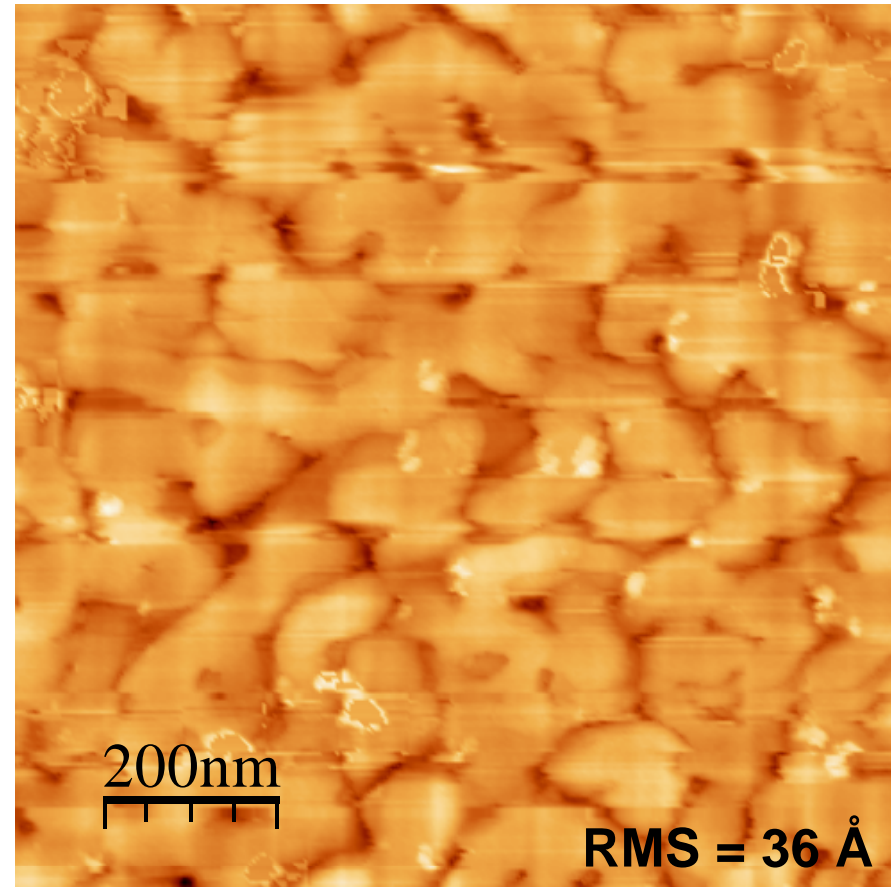


# Microscopie de tunelare (STM) - [1]

-Echipament: Scanning Probe Microscope - *NTEGRA Aura* (NT-MDT Co., Russia) -



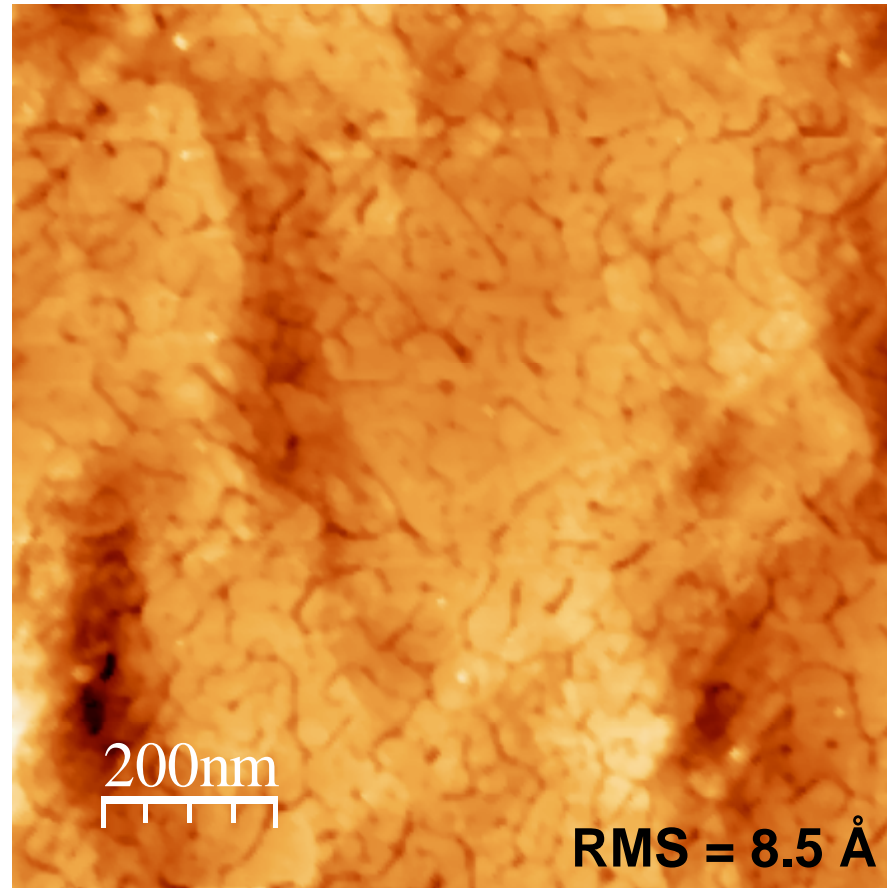
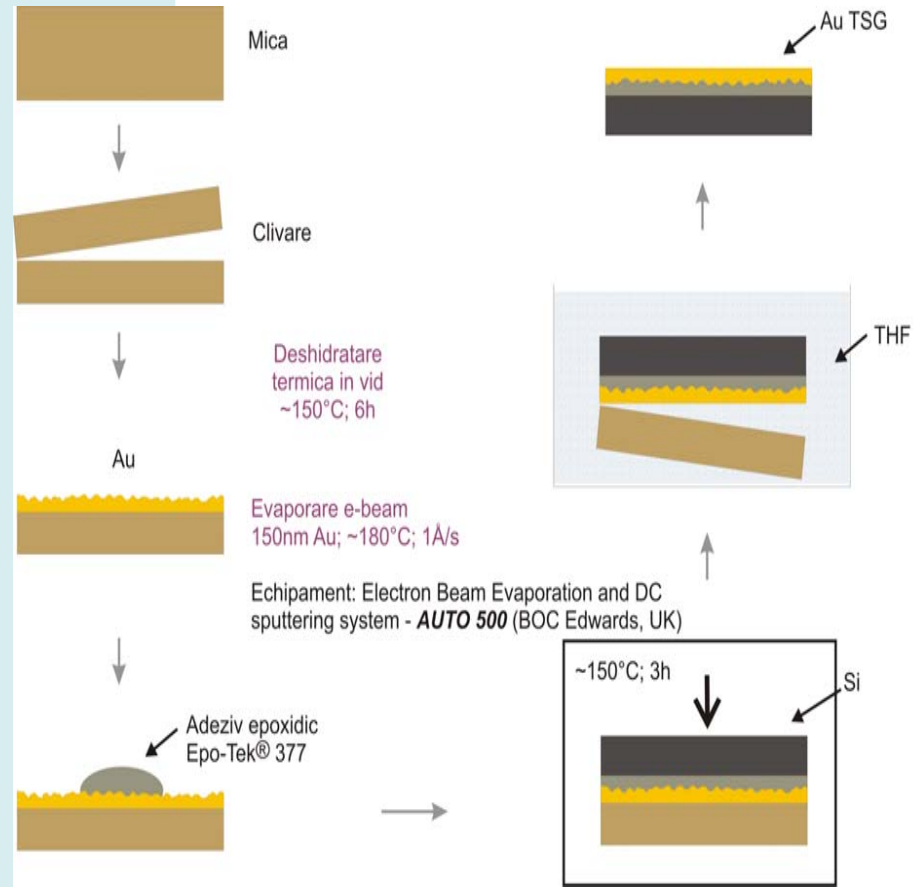
Au/Si [1x1  $\mu\text{m}$ ]



Au/Mica [1x1  $\mu\text{m}$ ]



# Microscopie de tunelare - [1]



1 x 1 μm

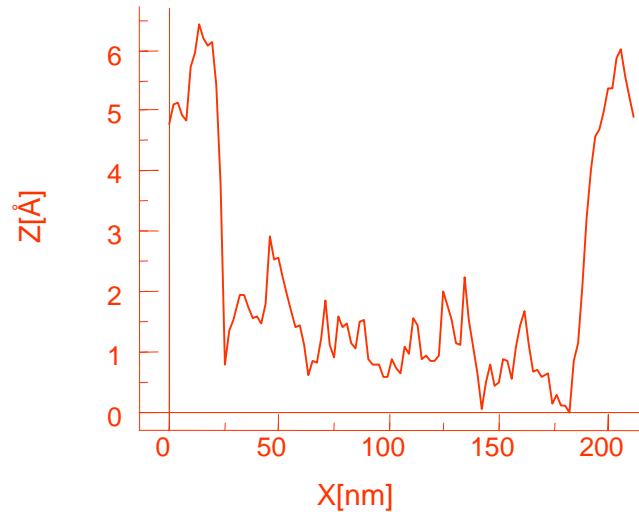
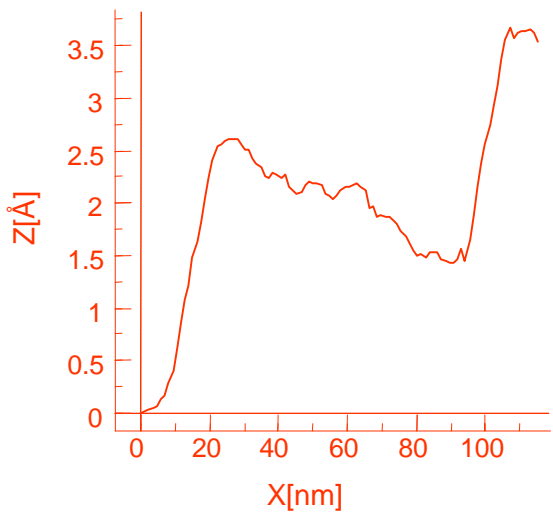
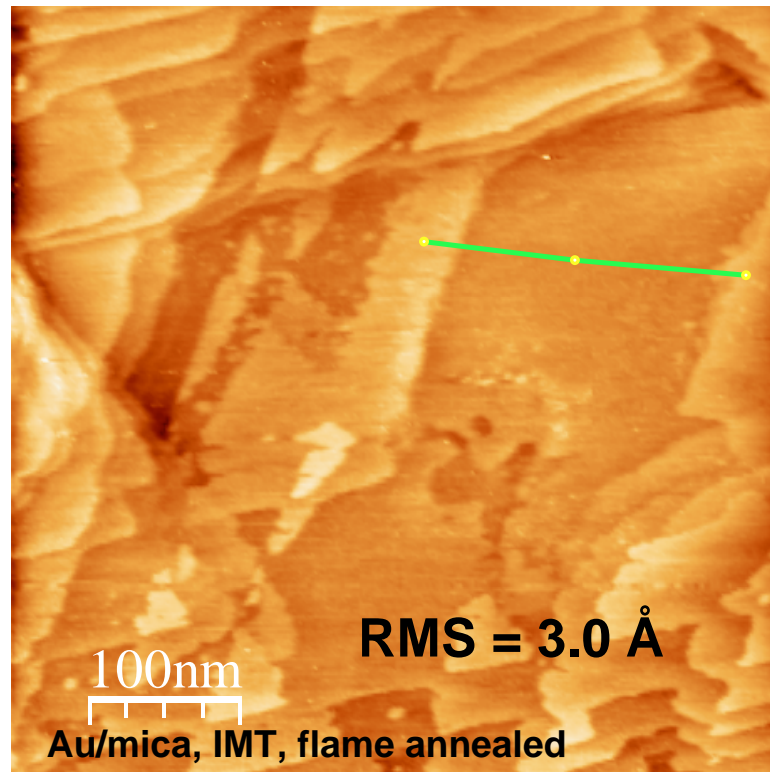
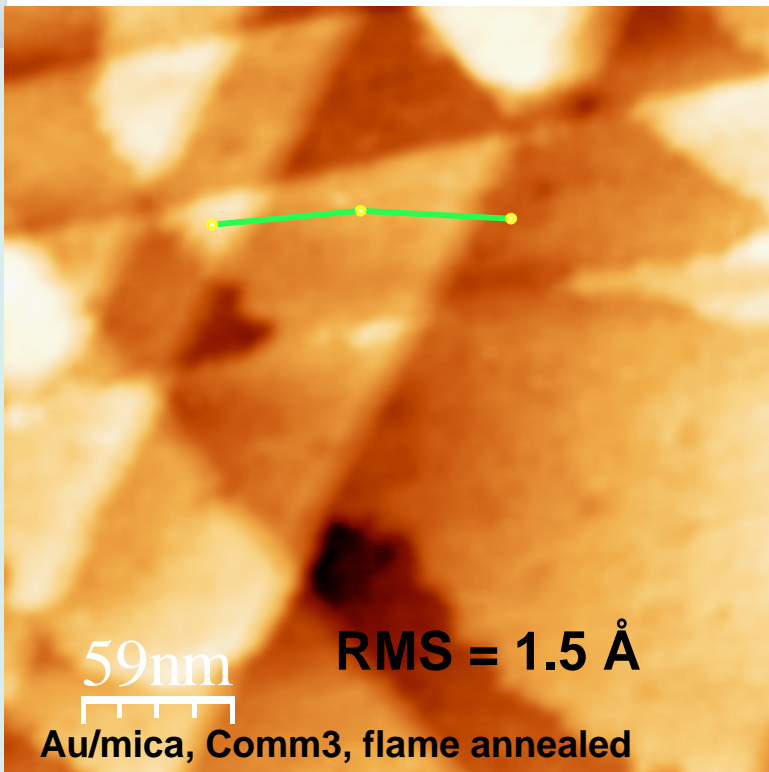
Au/mica

**TSG**

"template stripped gold"



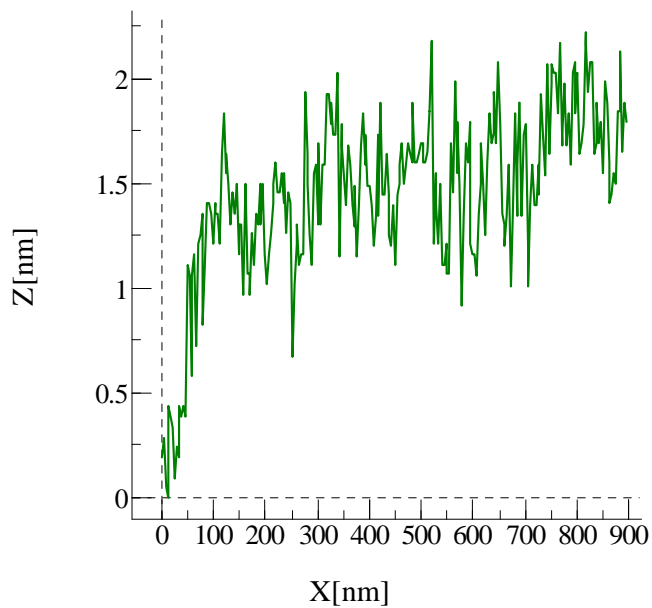
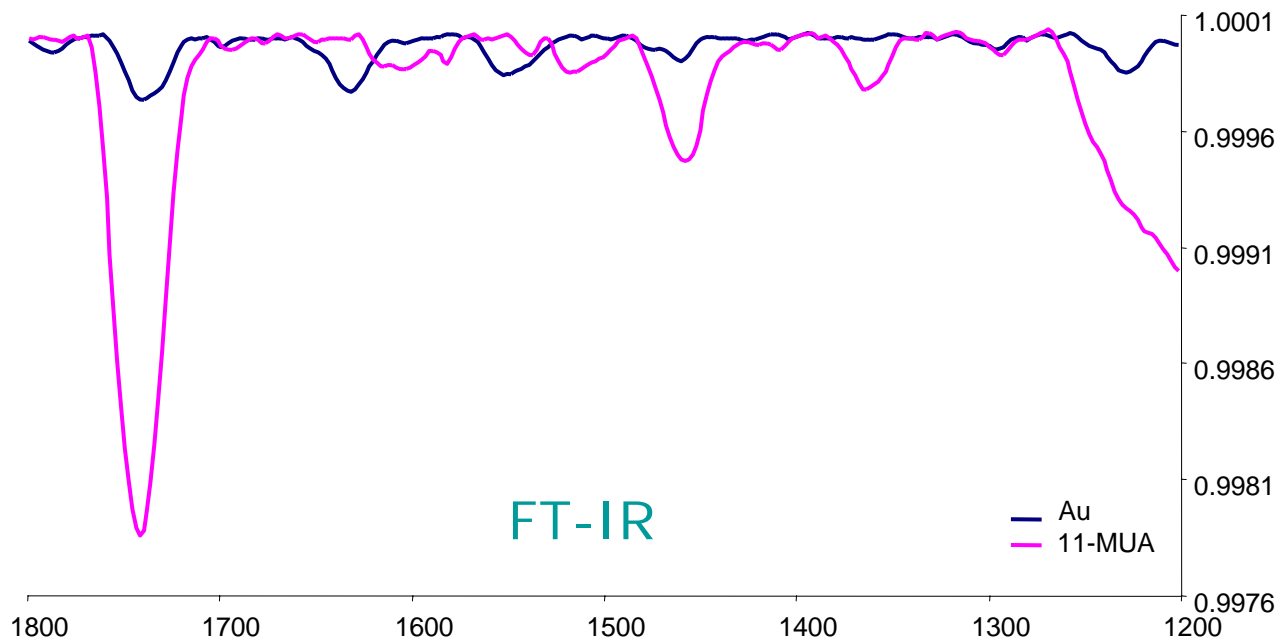
# Microscopie de tunelare - [1]



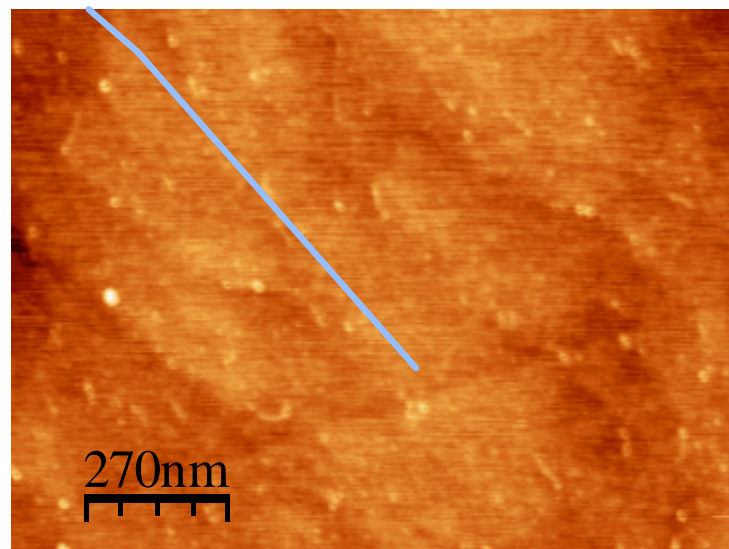




# TiO<sub>2</sub> (11-MUA)/Au [111]

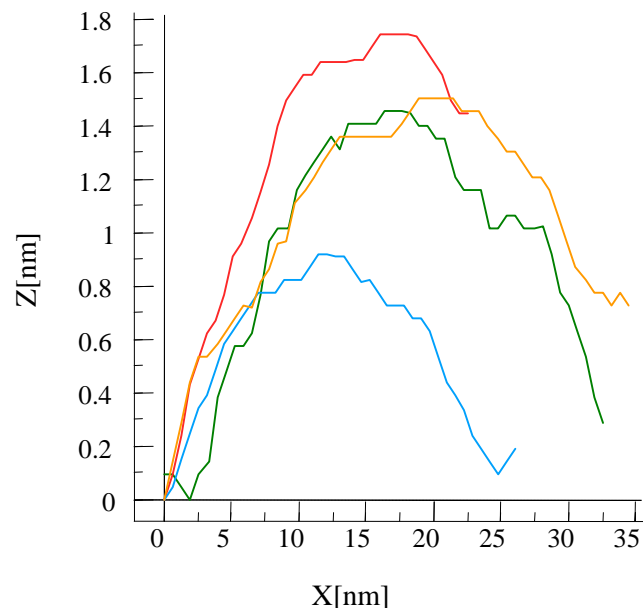
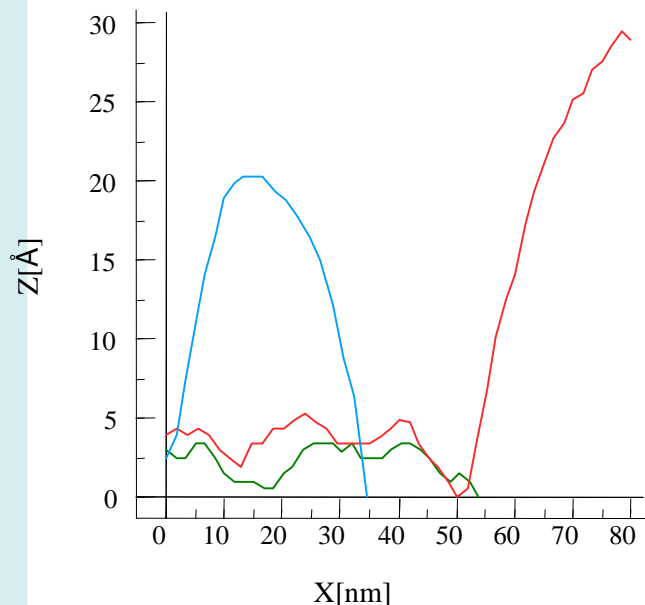
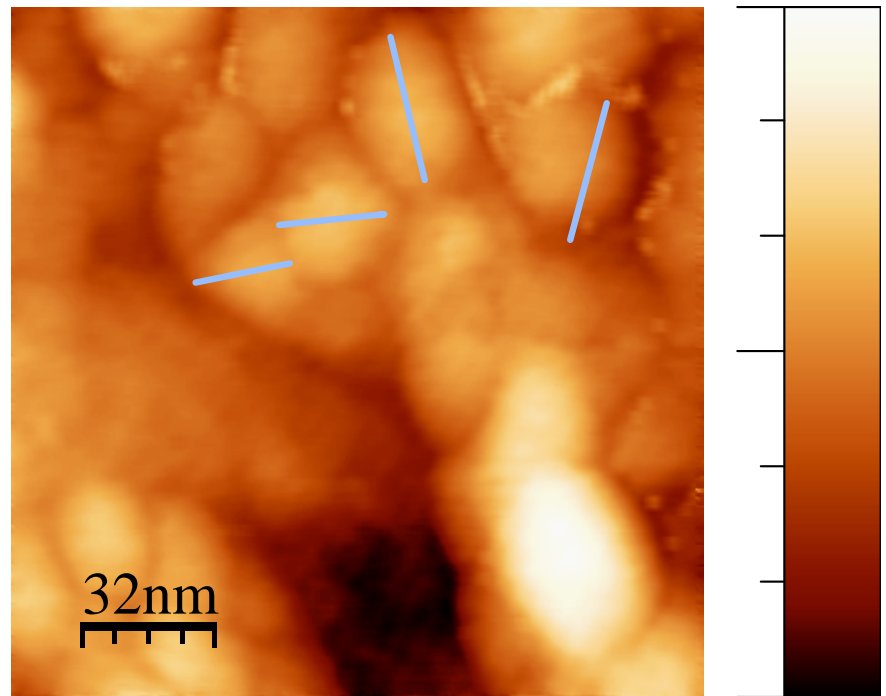
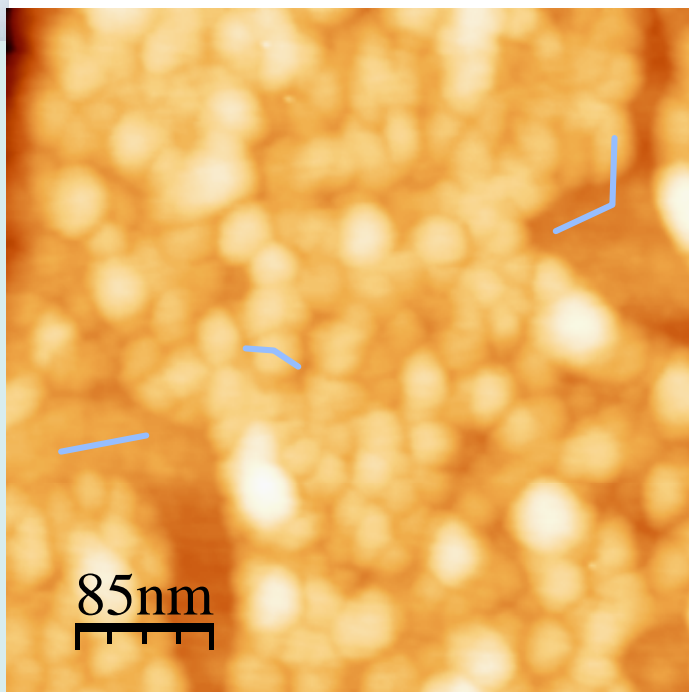


STM





# Immobilizzare covalentemente albumina serica umana (HSA)/Au [111]





# CONCLUZII

- Au (111) - metoda TSG - "template stripped gold"
- Caracterizari prin difractometrie de raze X
  - *Theta-2-Theta*
  - Pole figures
- Caracterizari prin microscopie de tunelare
- Imobilizare covalenta a albuminei serice umane





Va multumesc pentru atentie !

