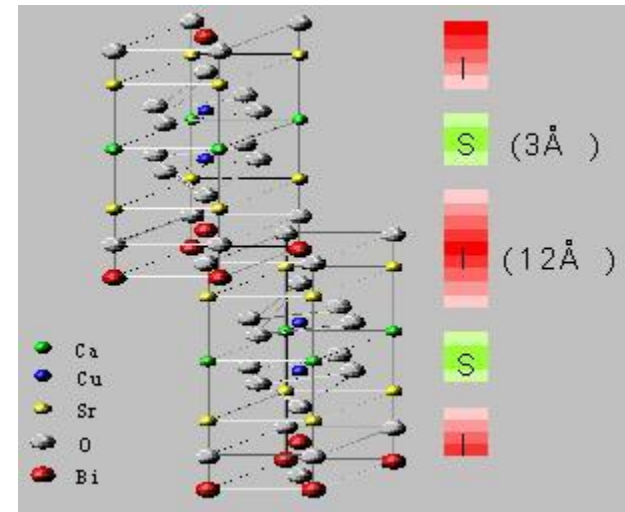
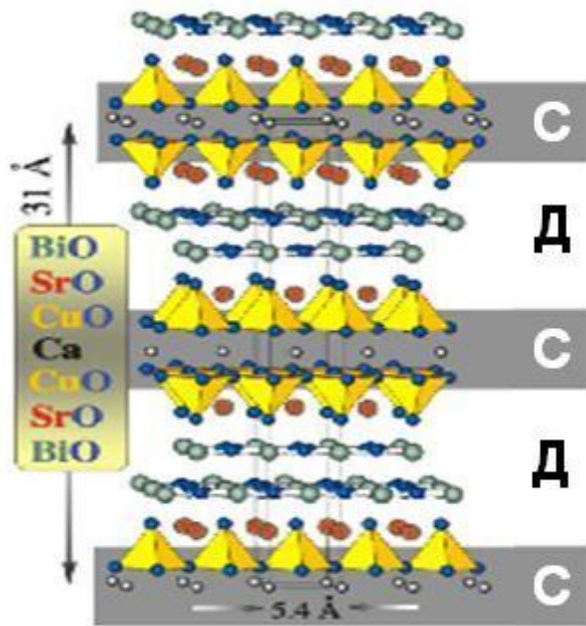


# Comparative analysis of IV-curve of Josephson junctions stack with trivial and nontrivial barriers

Morsi Sara

supervisors: Prof. Shukrinov Yury & Dr. Rahmonov Ilhom



## 1. Intrinsic Josephson effect was observed in 1992

[R. Kleiner, F. Steinmayer, G. Kunkel P. Müller, Phys. Rev. Lett. 68 (1992) 2394]

## It was investigated in the several work

[A. A. Yurgens, Super. Science Technol., 13 (2000) R85]

[Xiao Hu, Shi-Zeng Lin] Super. Science Technol., 23 (2010) 053001]

$$\frac{d\phi_l}{dt} = V_l - \alpha(V_{l+1} + V_{l-1} + 2V_l)$$

$$\frac{dV_l}{dt} = I - \sin \frac{\phi_l}{2} - \beta \frac{d\phi_l}{dt} \text{ (Trivial)}$$

$$\frac{dV_l}{dt} = I - \sin \phi_l - \beta \frac{d\phi_l}{dt} \text{ (Nontrivial)}$$

