

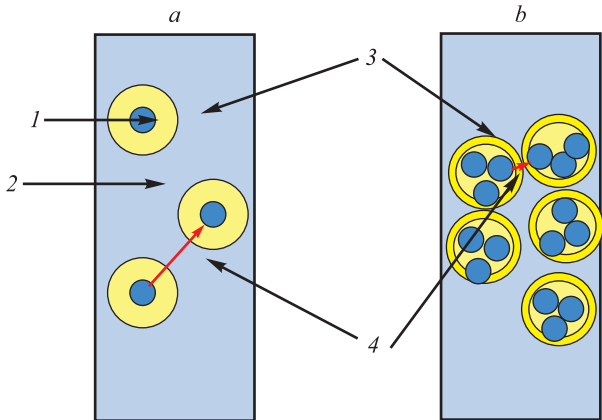


Fig. 7. Schematic representation of the morphology of the $(\text{Fe}_{0.45}\text{Co}_{0.45}\text{Zr}_{0.10})_{0.31}(\text{Al}_2\text{O}_3)_{0.69}$ nanogranular composite films, deposited in Ar – O_2 mixture (a) and $(\text{Fe}_{0.45}\text{Co}_{0.45}\text{Zr}_{0.10})_{0.52}(\text{PZT})_{0.48}$ films, deposited in Ar – O_2 mixture at $P_{\text{O}_2} = 3.0$ mPa (b):

1 – metal cores from FeCoZr alloy;

2 – Al_2O_3 or PZT dielectric matrix;

3 – various oxide phases formed during the chain of transformations $\text{FeO} \rightarrow \text{Fe}_3\text{O}_4 \rightarrow \text{Fe}_2\text{O}_3$ around metal cores;

4 – direction of electron tunneling (jumping) (red arrows)