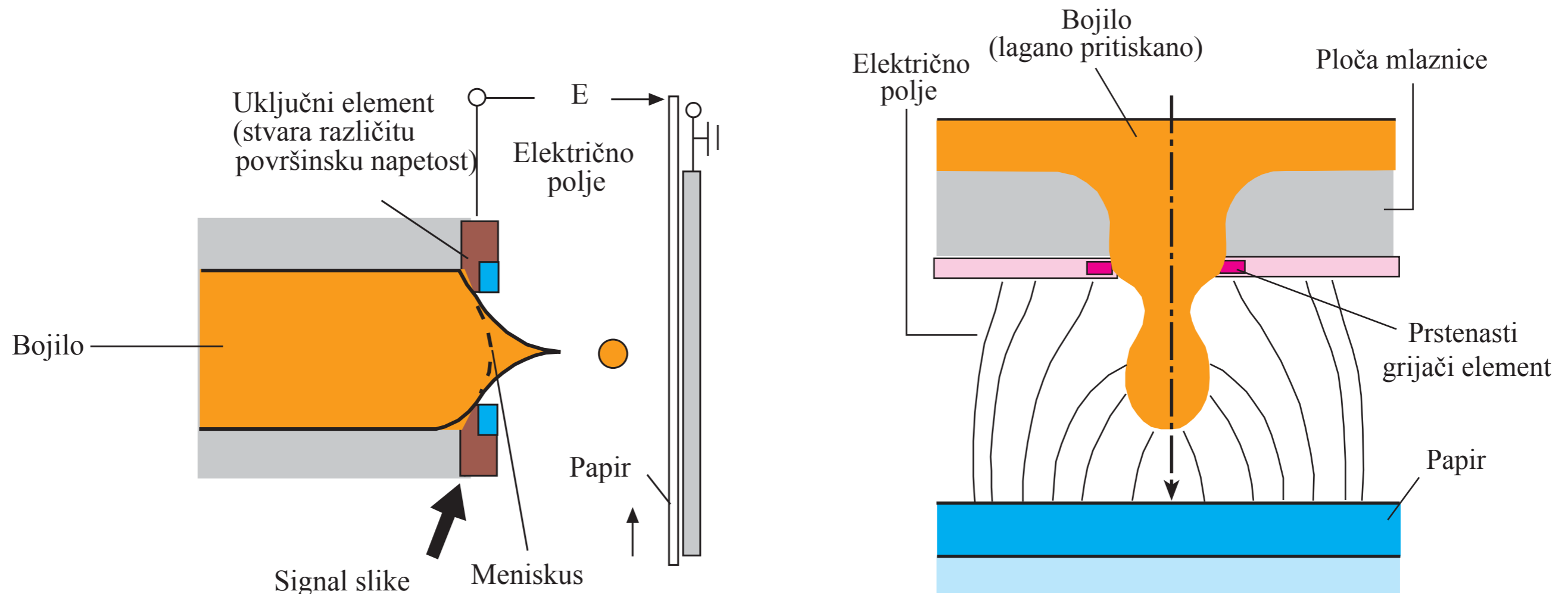


LIFT Drop on Demand Printing

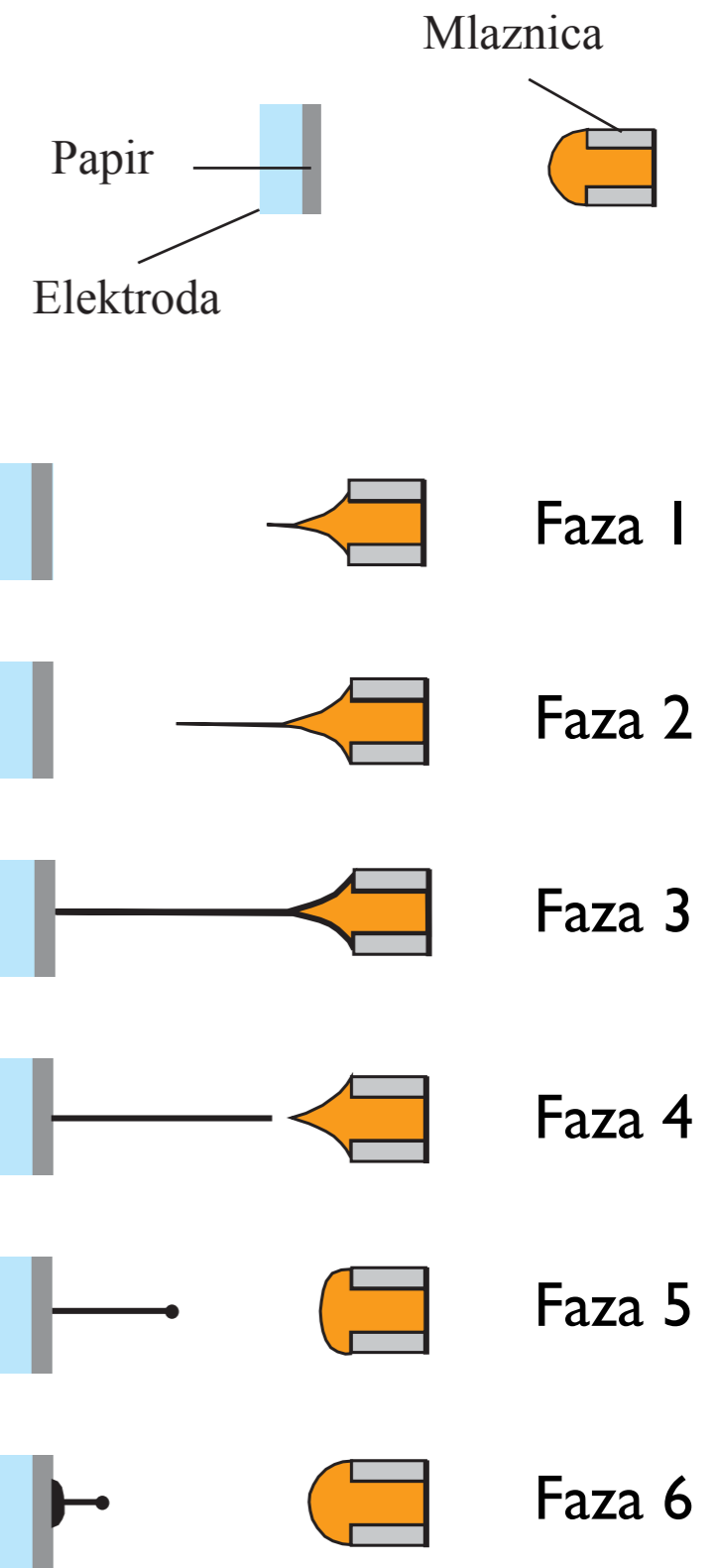
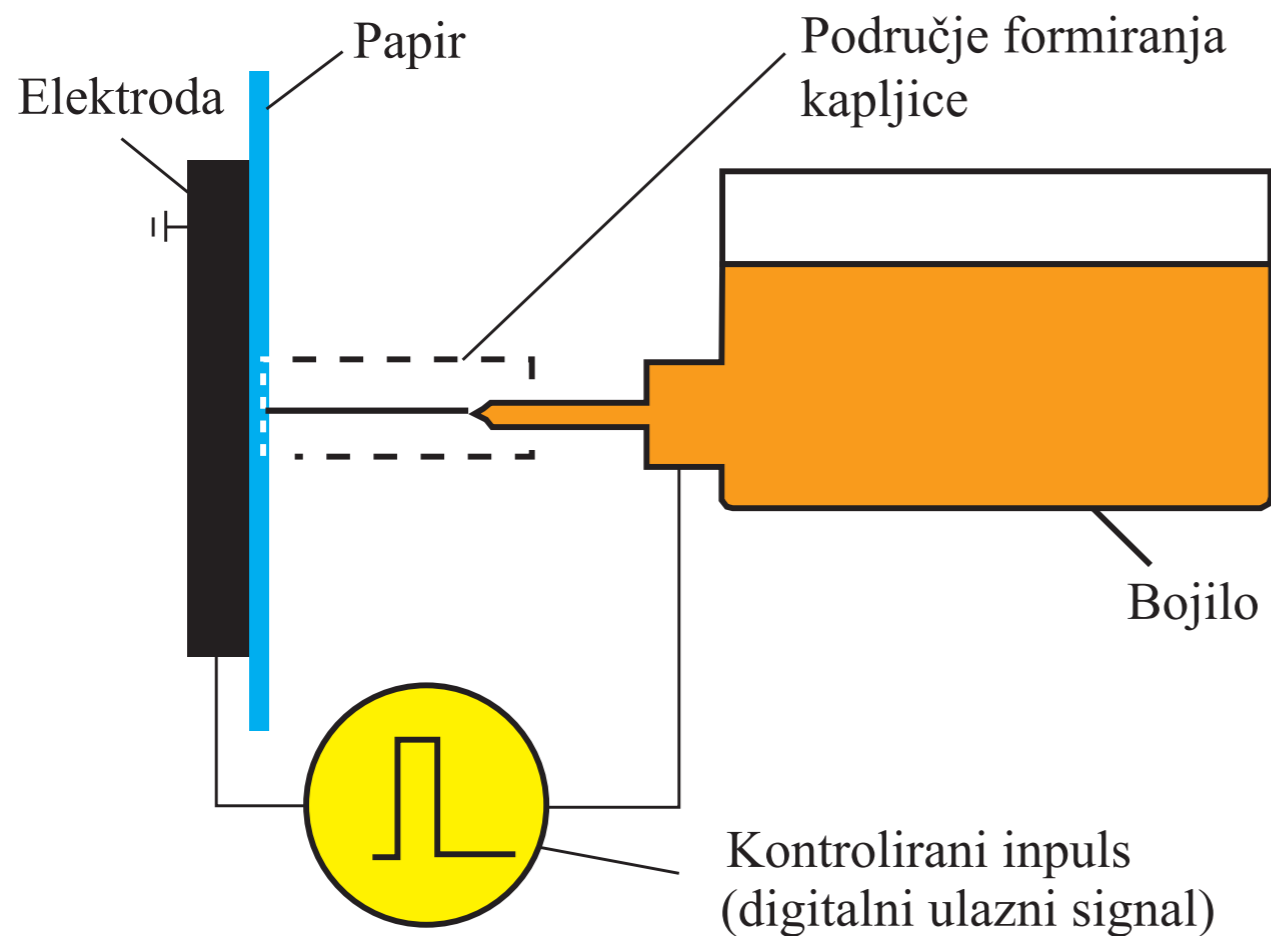
- elektrostatski Inkjet temelji se na konstantnom djelovanju električnog polja koje je formirano između ploče sa mlaznicama i nosača tiskovne podloge
- tekuće bojilo se dijeluje samo laganim potlakom unutar mlazne komore
- najčešći princip elektrostatskog inkjeta temelji se na prstenastim grijačima (razmak 10 - 20 μm)



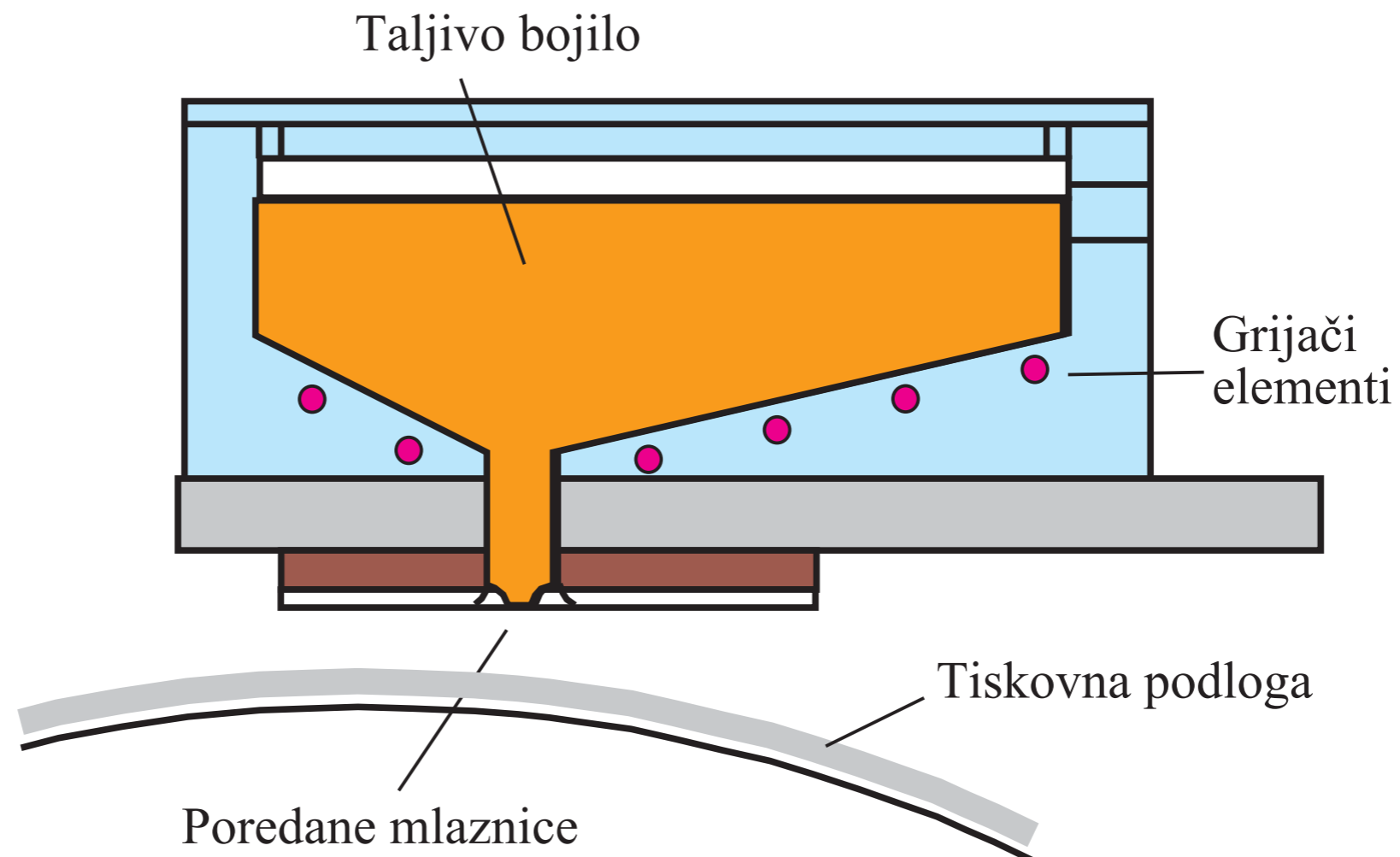
- zagrijavanje grijača = smanjenje površinske napetosti bojila (formiranje različitih veličina kapi)

Taylorov Elektrostatski Inkjet

- volumen kapljice je tako određen duljinom vremenskog trajanja kontrolnog signala.
- promjer mlaznice iznosi oko $400\ \mu\text{m}$, dok je razmak između mlaznica oko $1\ \text{mm}$.
- rezolucija otiskivanja $600\ \text{dpi}$

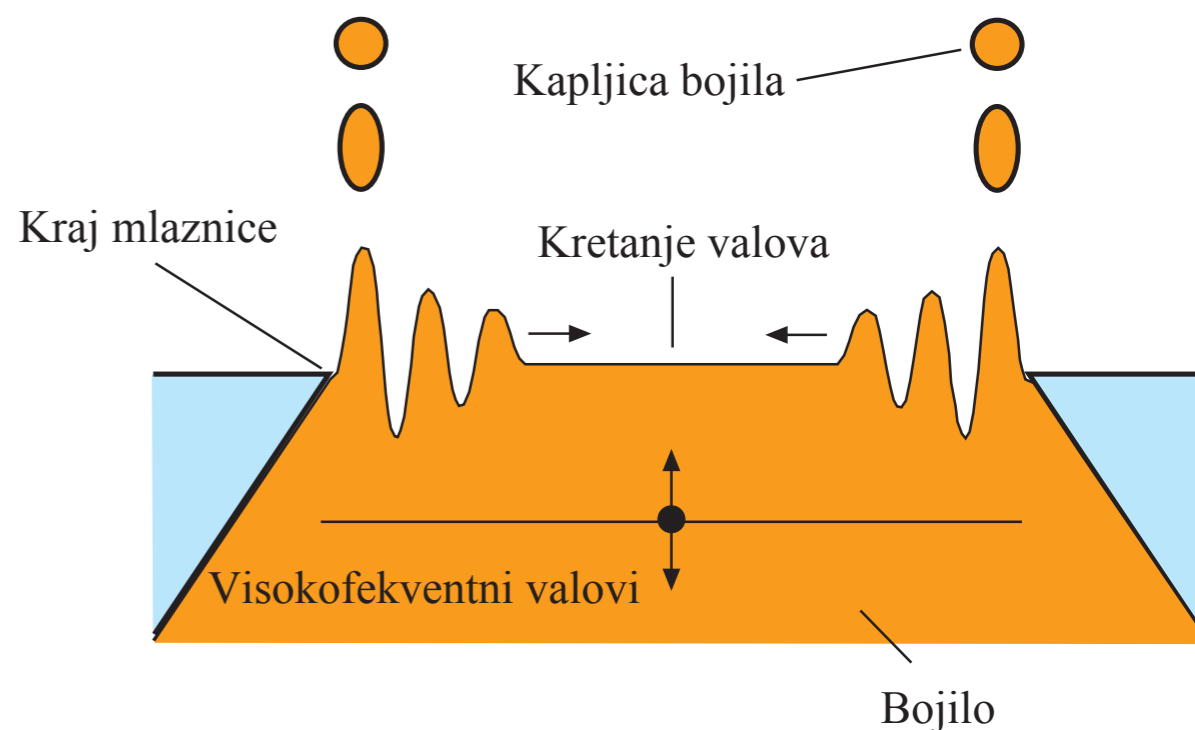
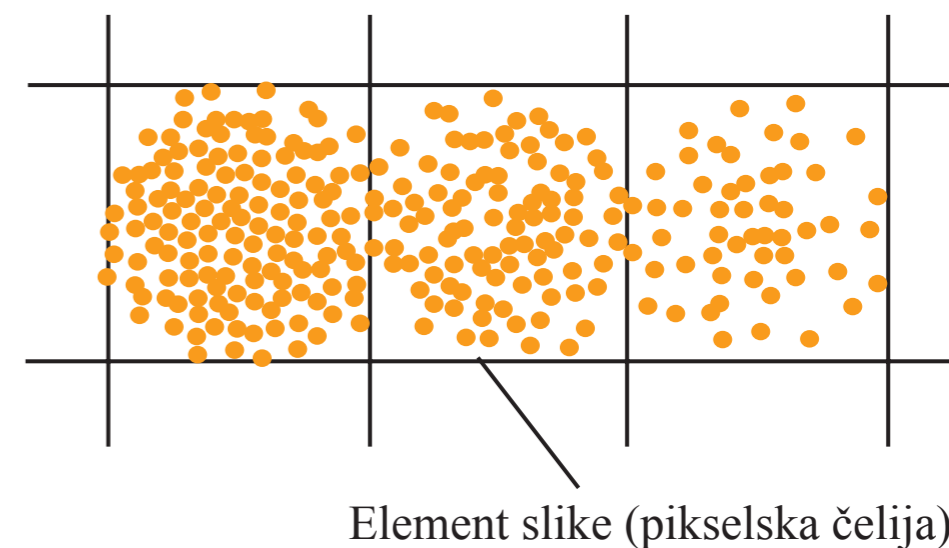
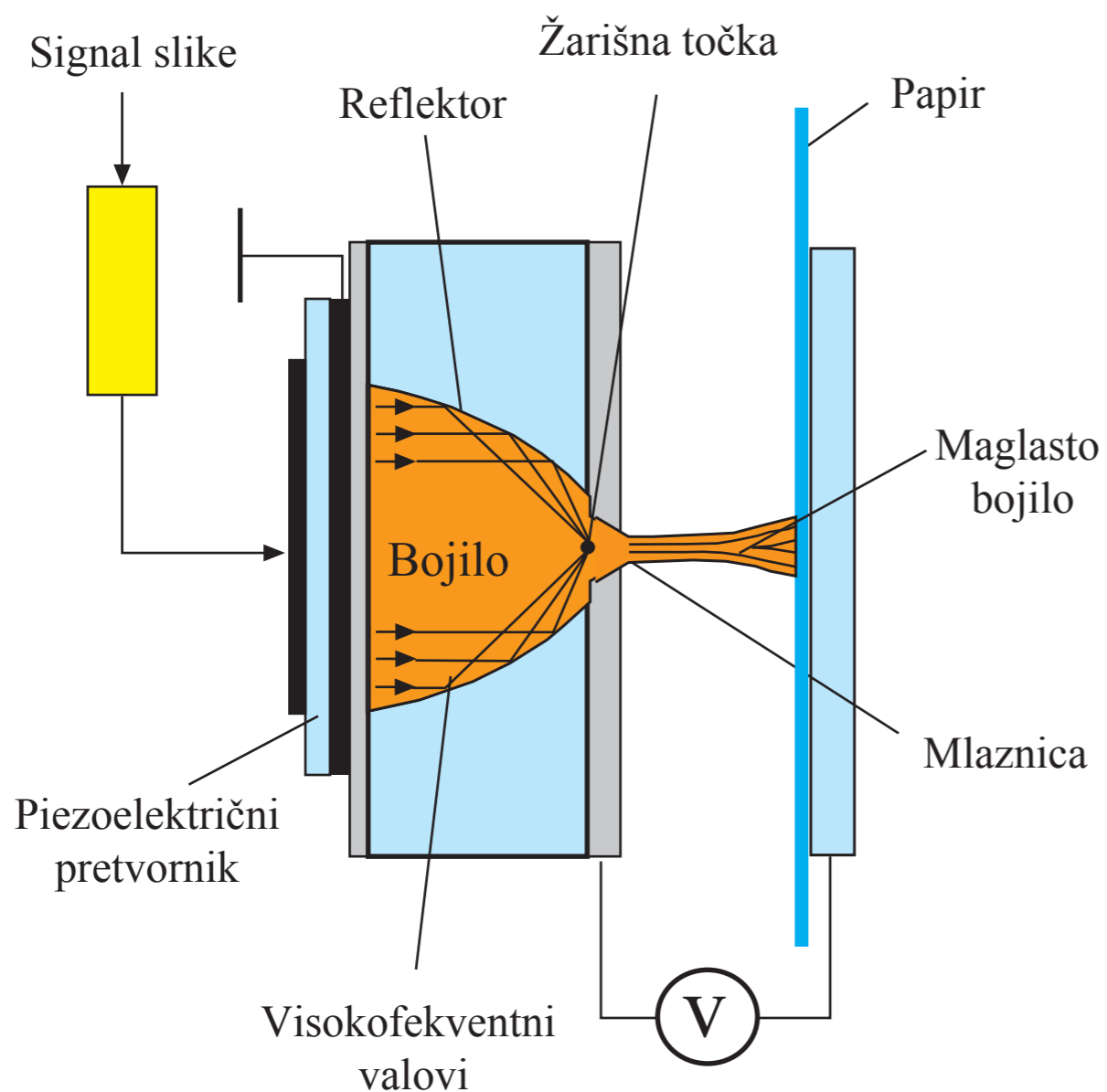


- Teylorov princip je pogodnan za otiskivanje taljivih bojila (specijalno bojilo koje tijekom otiskivanja mijenja svoje agregatno stanje)
- u spremniku se nalaze grijači koji će zagrijavati bojilo = preduvjet za kontrolirani protok bojila kroz mlaznice.
- u kontaktu sa hladnom podlogom doći će se naglo hlađenja bojila, te njenog potpunog skrućivanja (otiskivanje neupojnih i krutih tiskovnih podloga kao što su: staklo, keramika, plastika i metali)

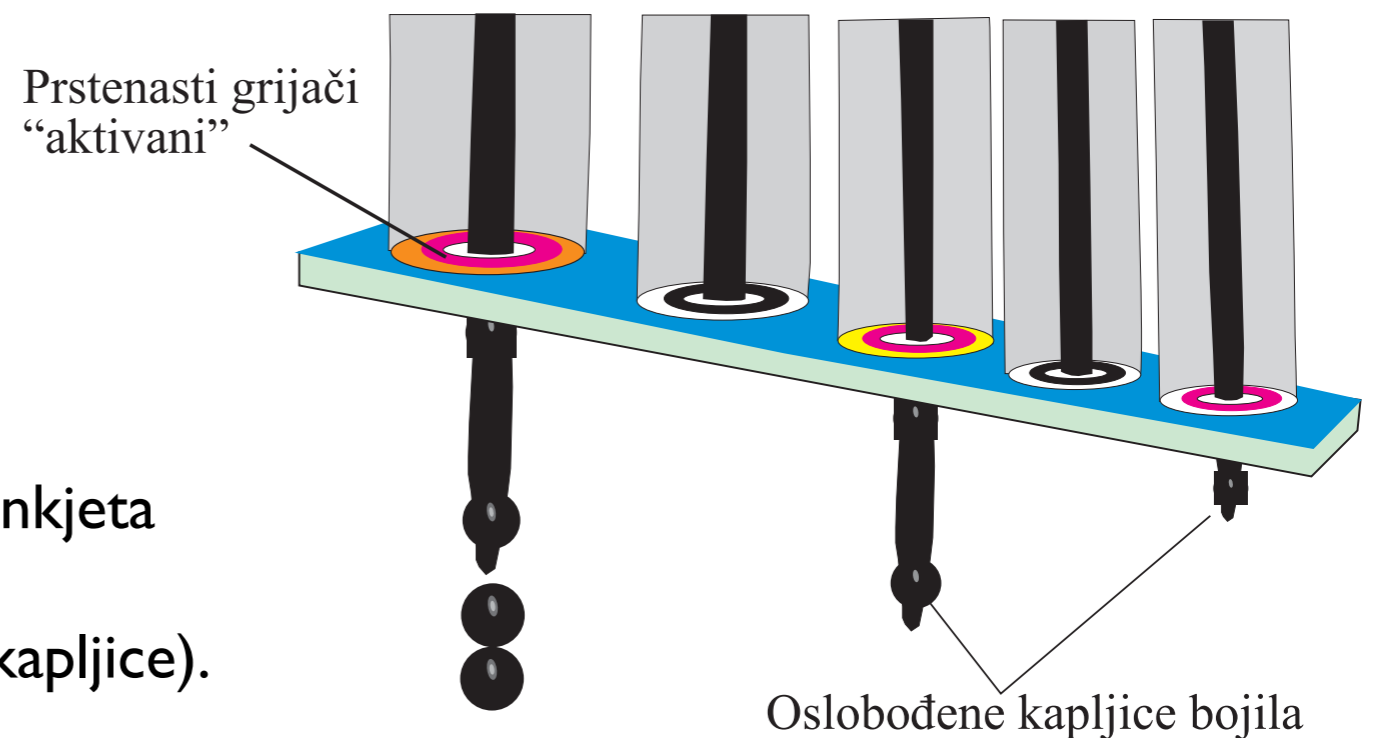
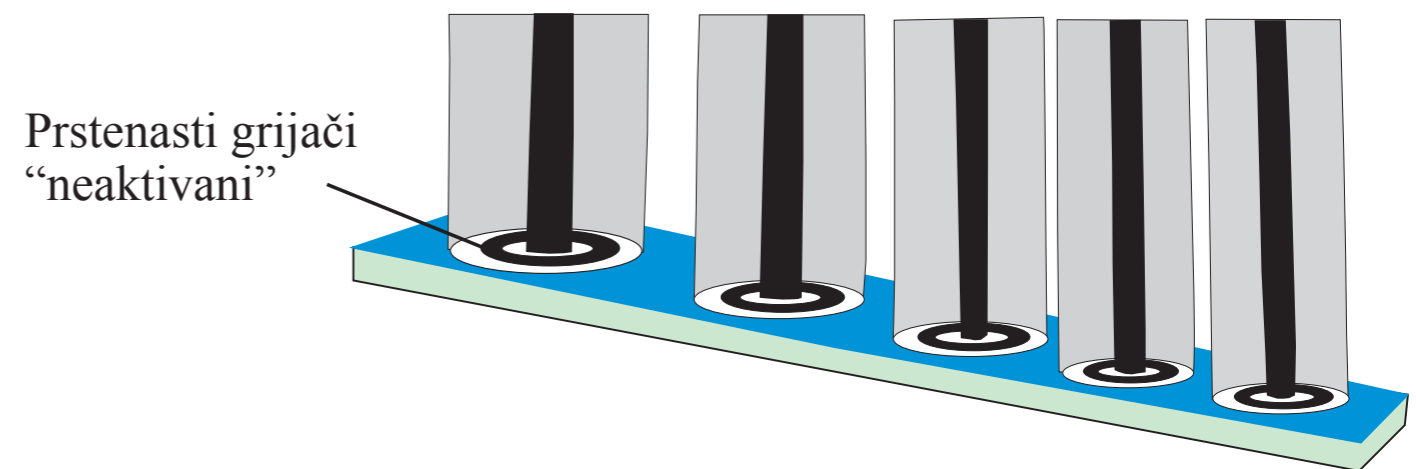
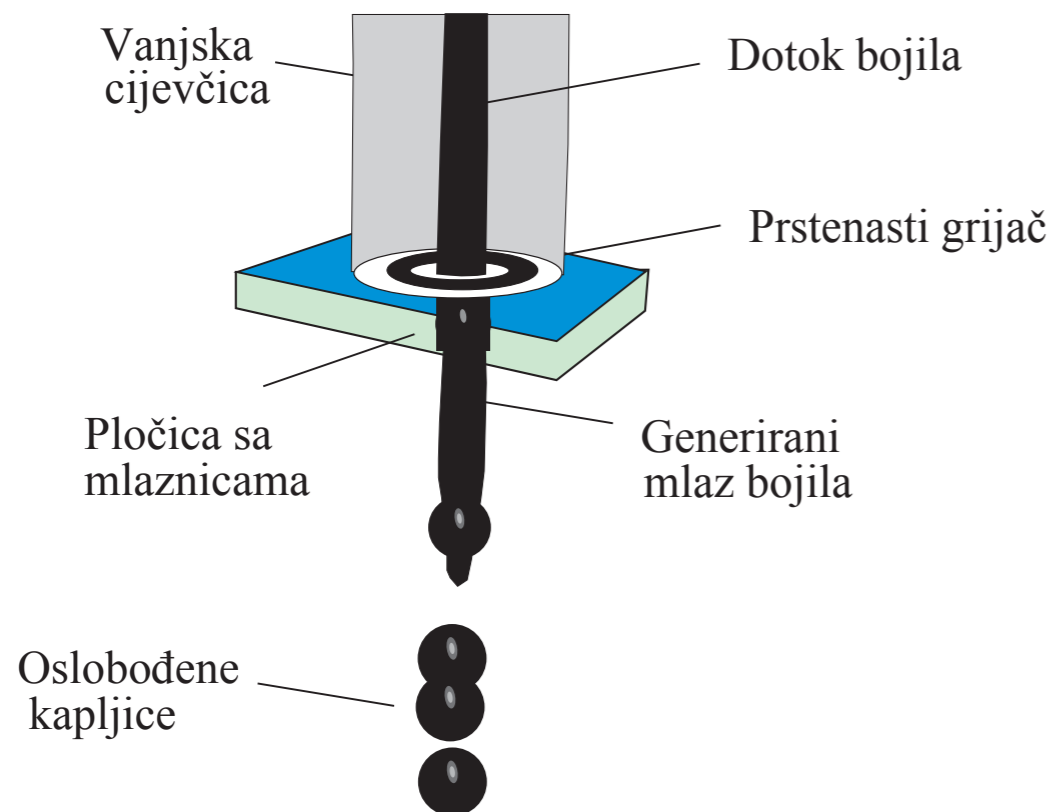


Mist elektrostatski Inkjet

- elektrostatski Inkjet-u koji radi na principu stvaranja vrlo sitnih kapljica bojila primjenjujući ultrazvučne valove (tehnika otiskivanja u razvoju).
- formirane kapljice boje se mogu usporediti sa stanjem aerosoli (kapljica su u nano veličinama).

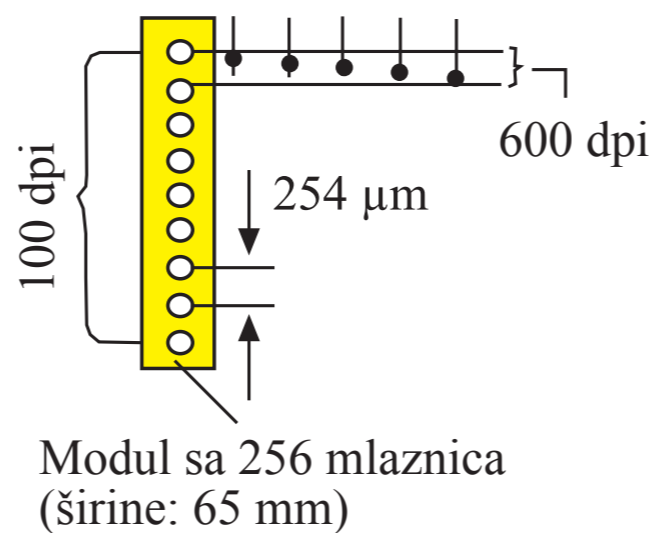
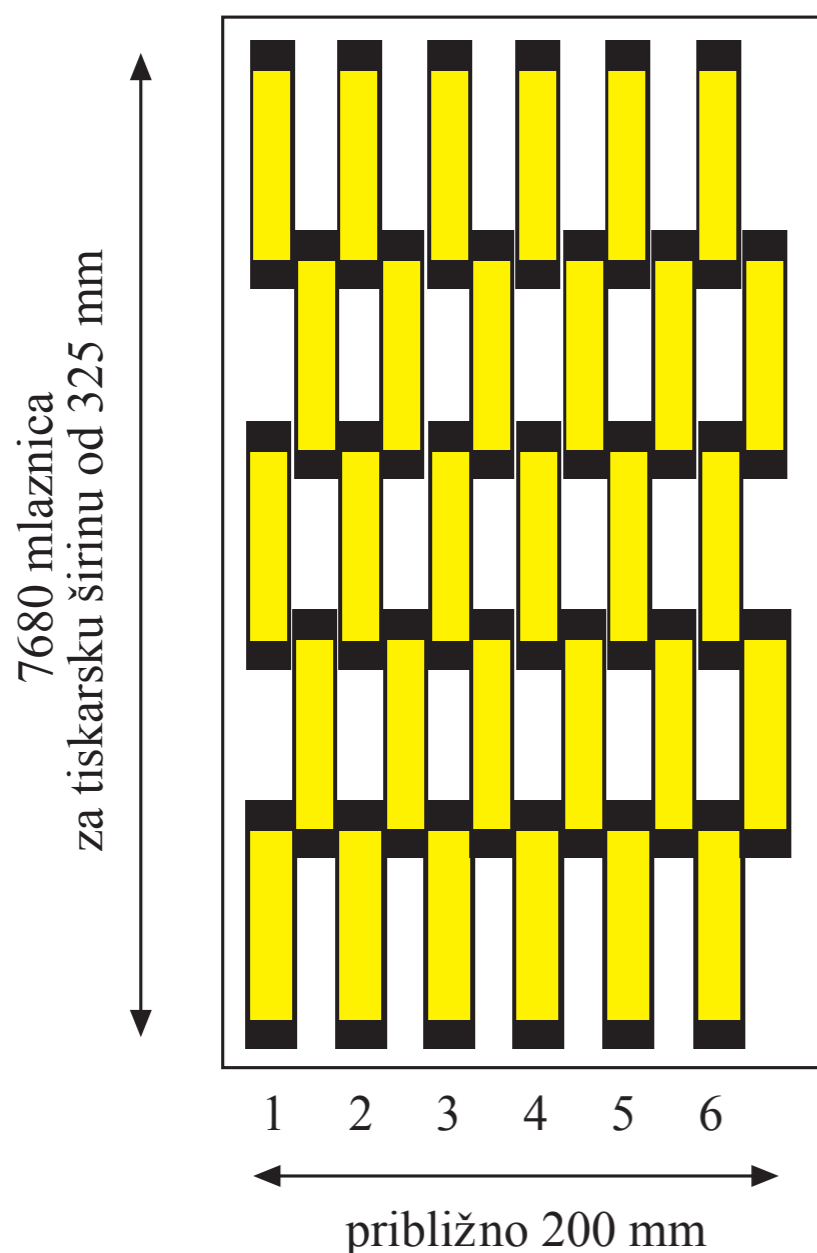


Protočni (Stream) Inkjet

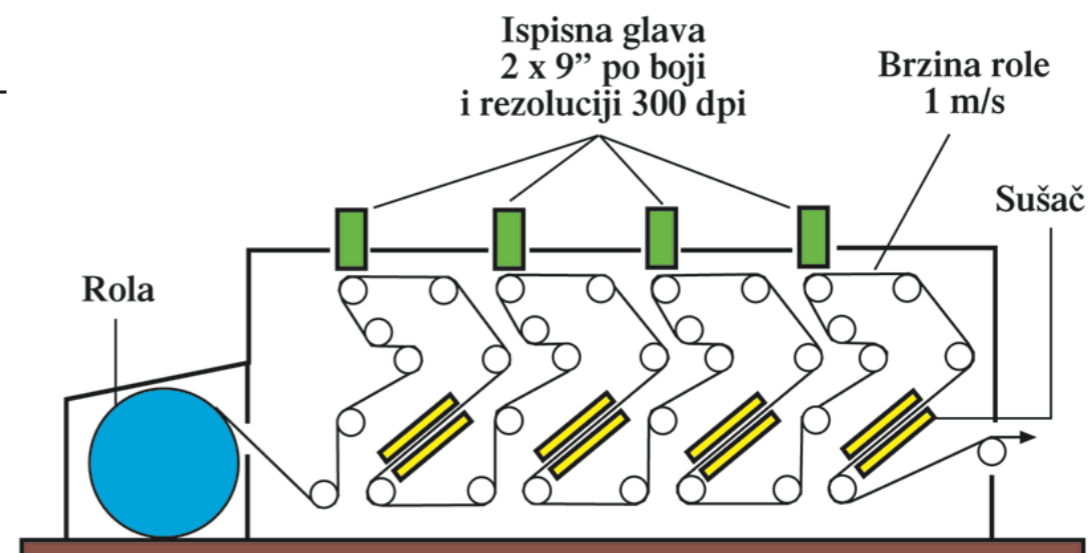


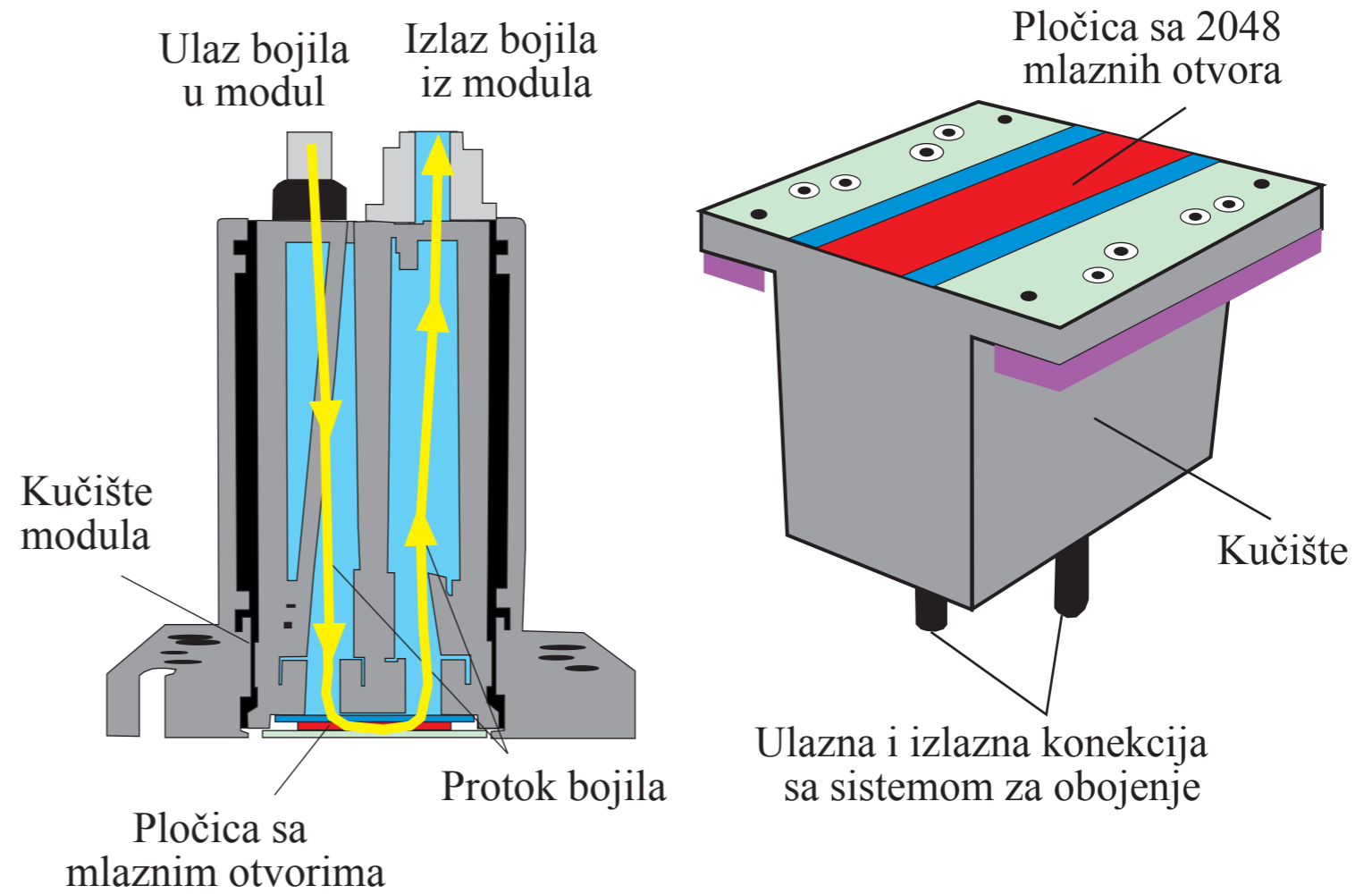
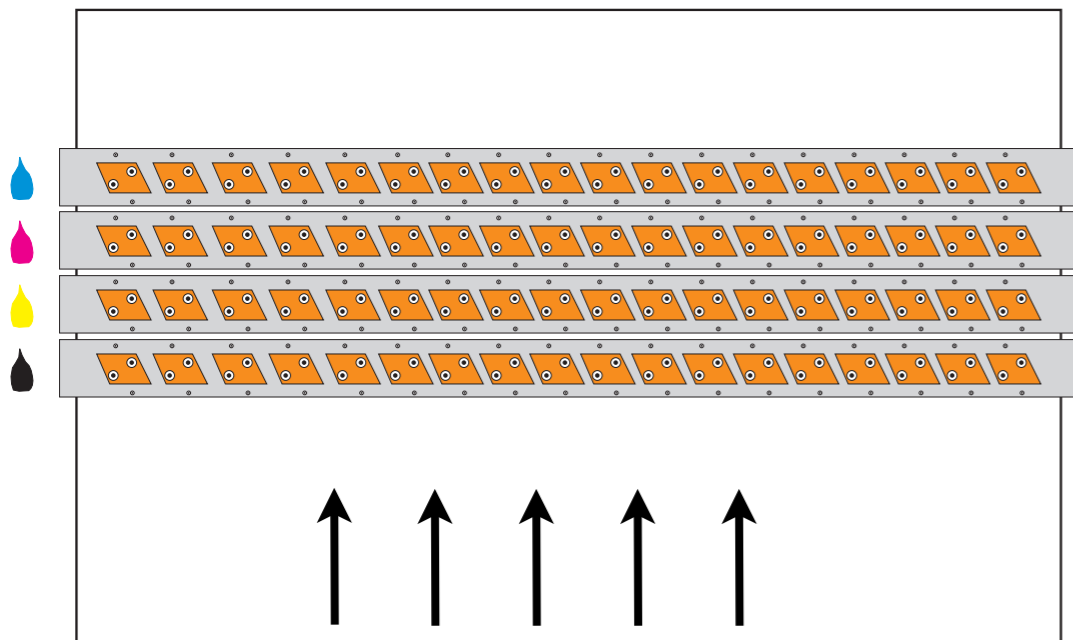
- konstruktor Esterman Kodak
- hibridan Inkjet, (kombinaciji kontinuiranog Inkjeta (distribucija bojila) i Inkjeta koji se izvodi principom kapanjem na zahtjev (formiranje kapljice)).
- brzina otiskivanja od 5 m/s, u rezoluciji od 600 dpi.

- riječ je o strojevima s modularnom glavom koji tiskaju iz role
- Kodak Versamark i Kodak Prosper (32 cm i 50 cm)
- zbog zasušivanja mlaznice moraju biti mokre (rade non-stop)



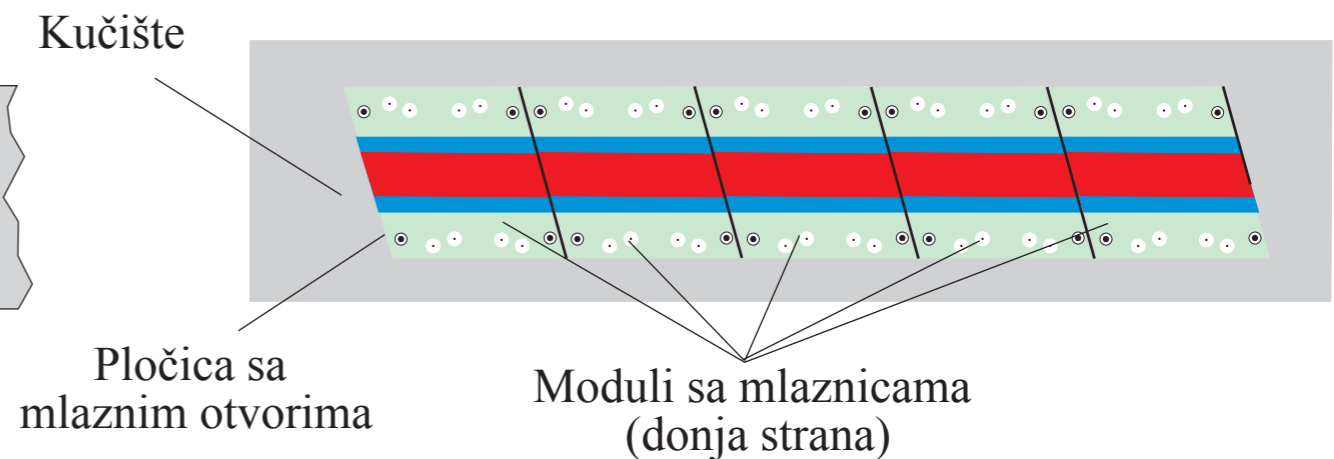
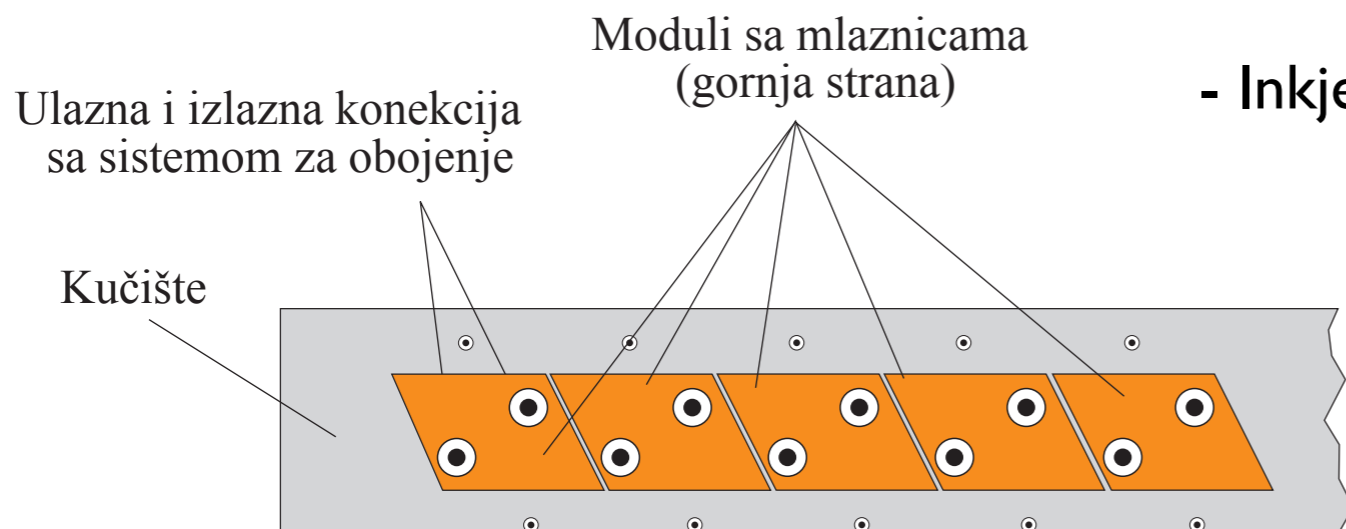
←
Smjer kretanja
papira





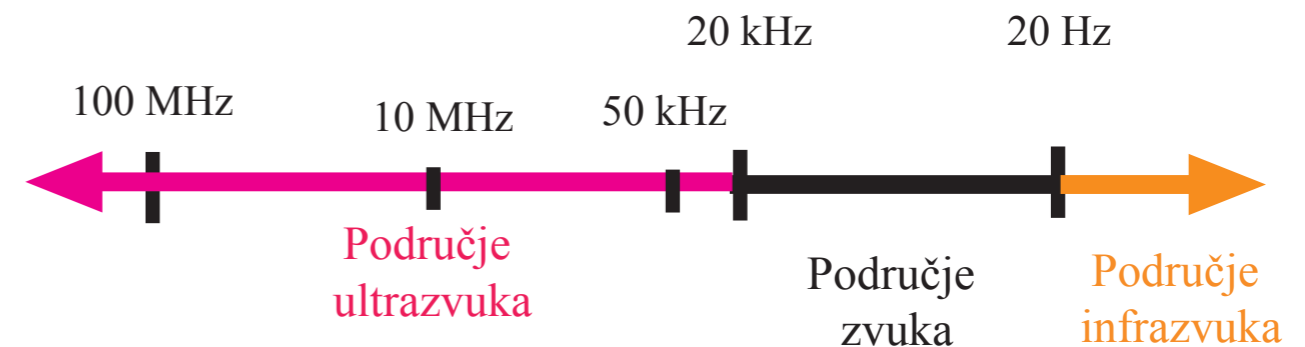
Fuji Samba

- Inkjet pisači s modularnom glavom koji tiskaju iz arka



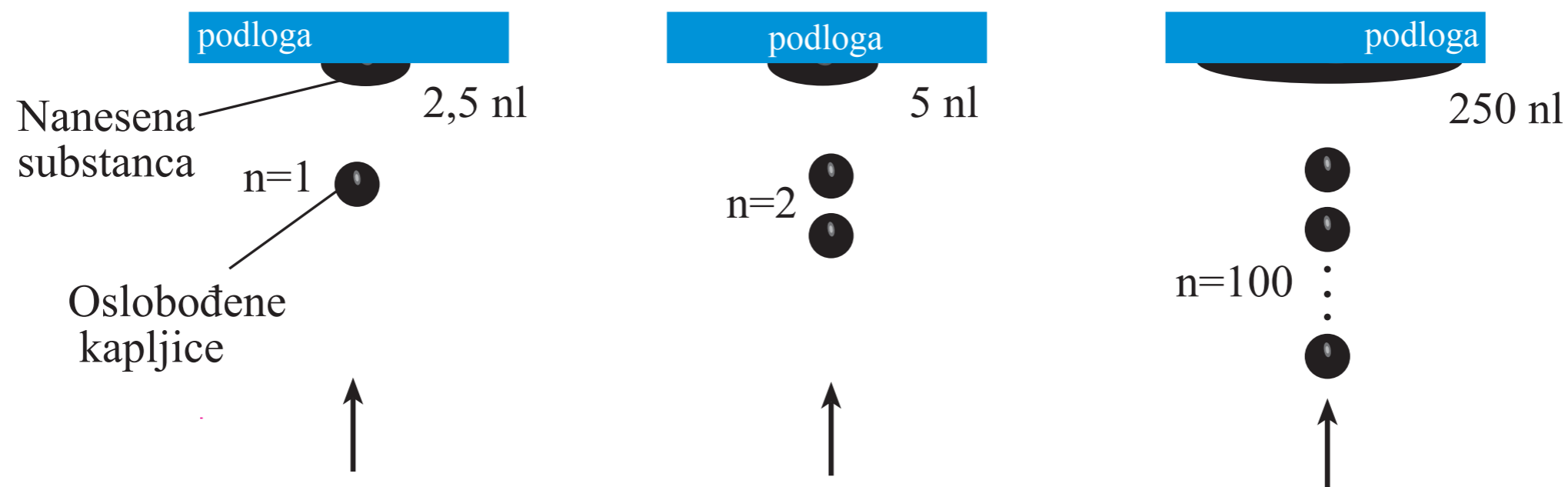
Farmaceutski ultrazvučni Inkjet

2 načina formiranja kapi:

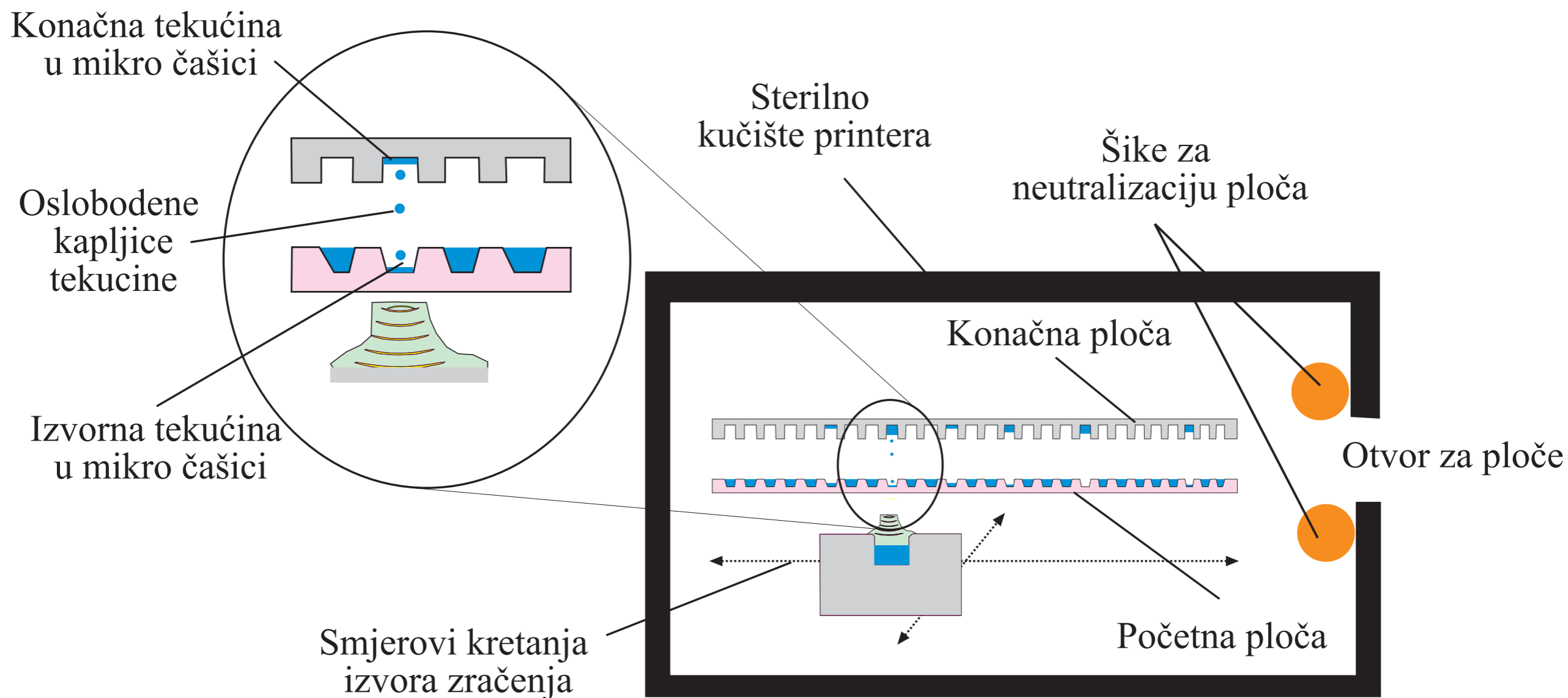


Elektrostrikcija = generator ultrazvuka je kvarcni generator, čiji je rad zasnovan na tzv. piezoelektričnom efektu nekih kristala (kvarc, turmalin i dr.)

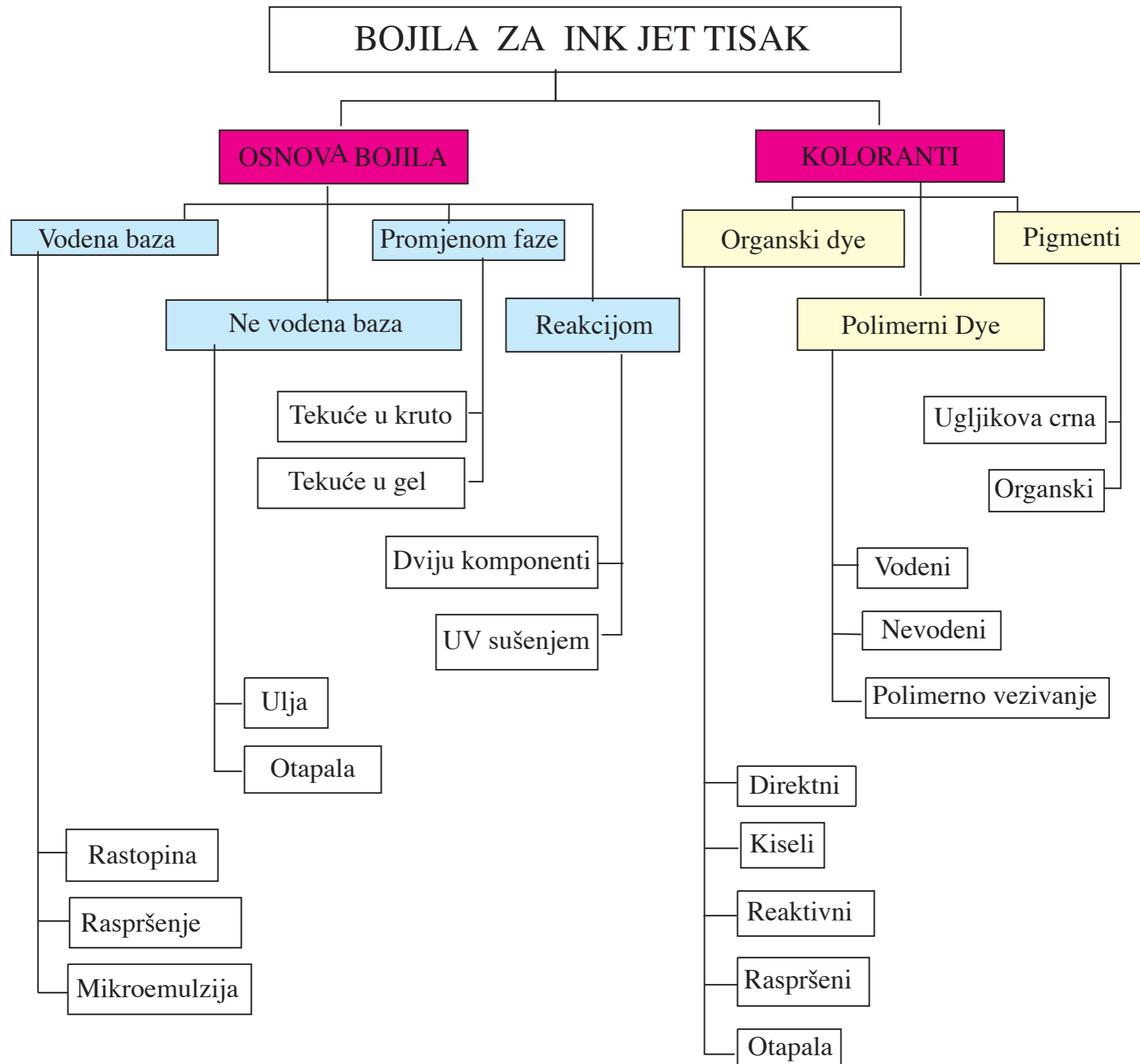
Magnetostricija = zasnovana je djelovanju magnetnog polja na materijale koji će pritom mijenjaju dimenzije (željezo, kobalt, nikal itd.)



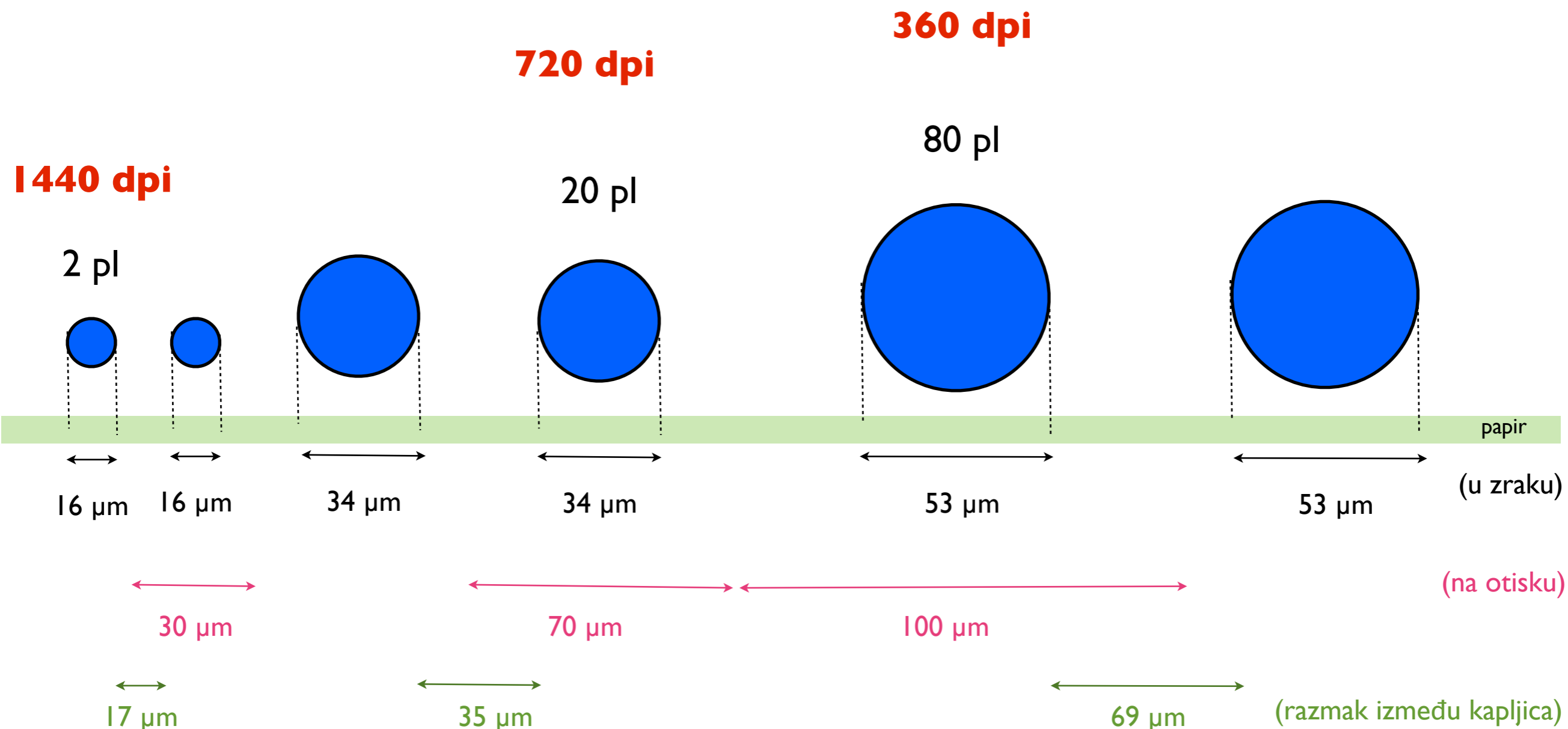
Ultrazvučni printer



Inkjet bojila



Nanašanje boja na tiskovnu



Tiskovne podloge

Standardna Papirna tiskovna podloga

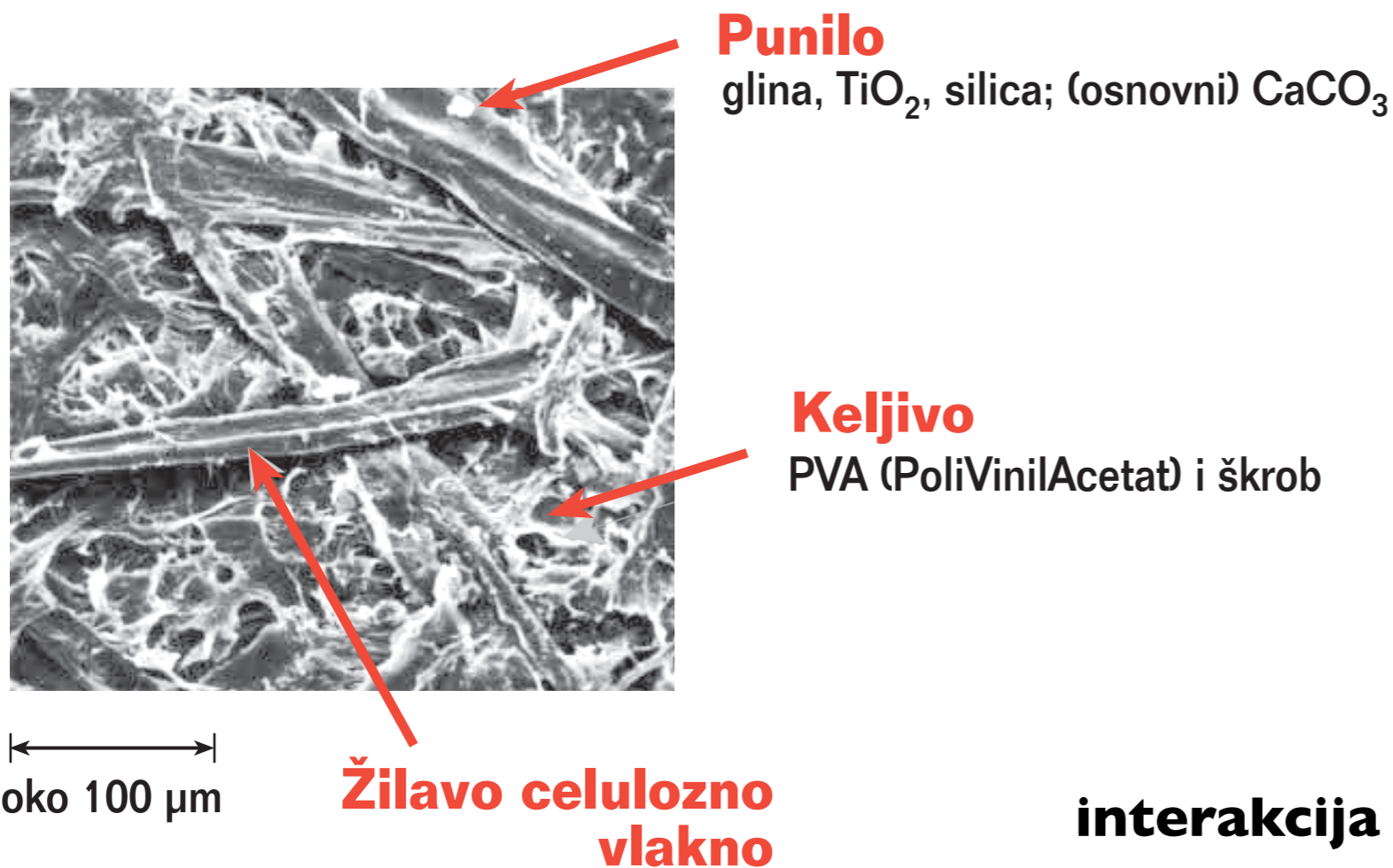
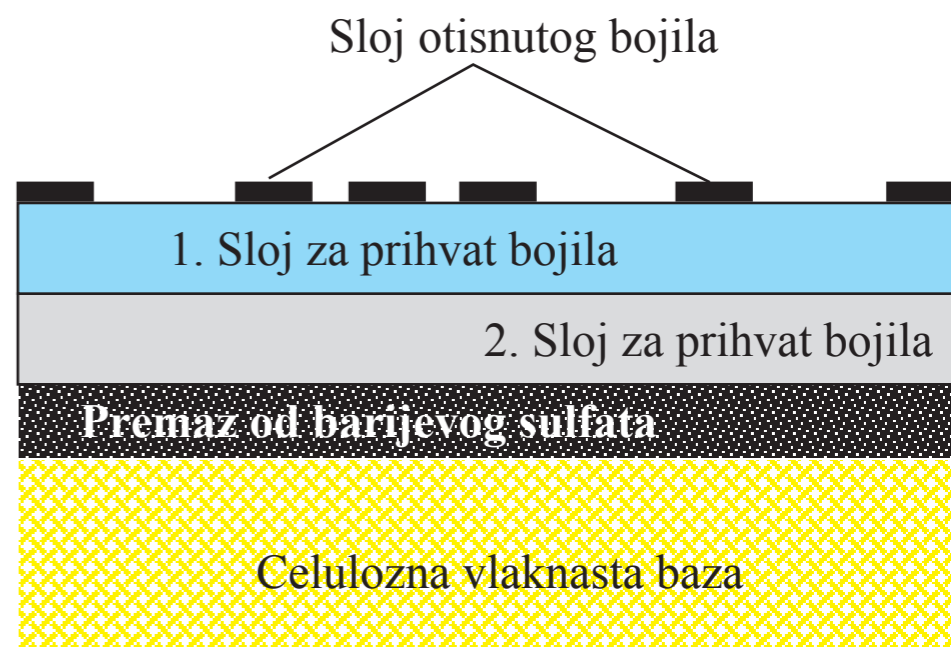
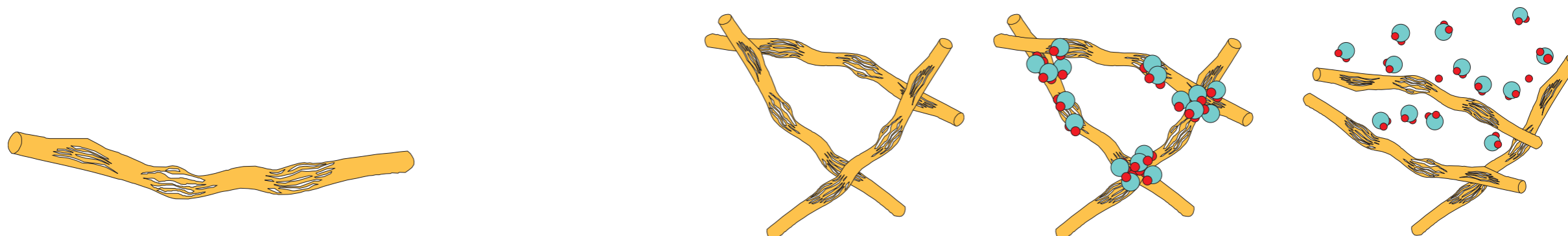


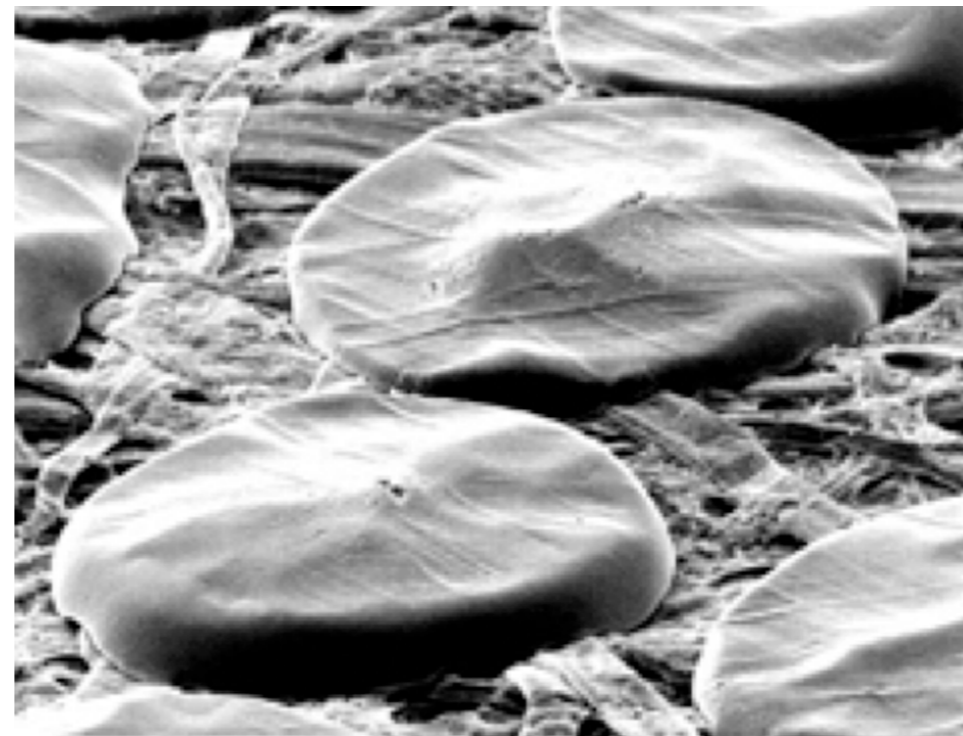
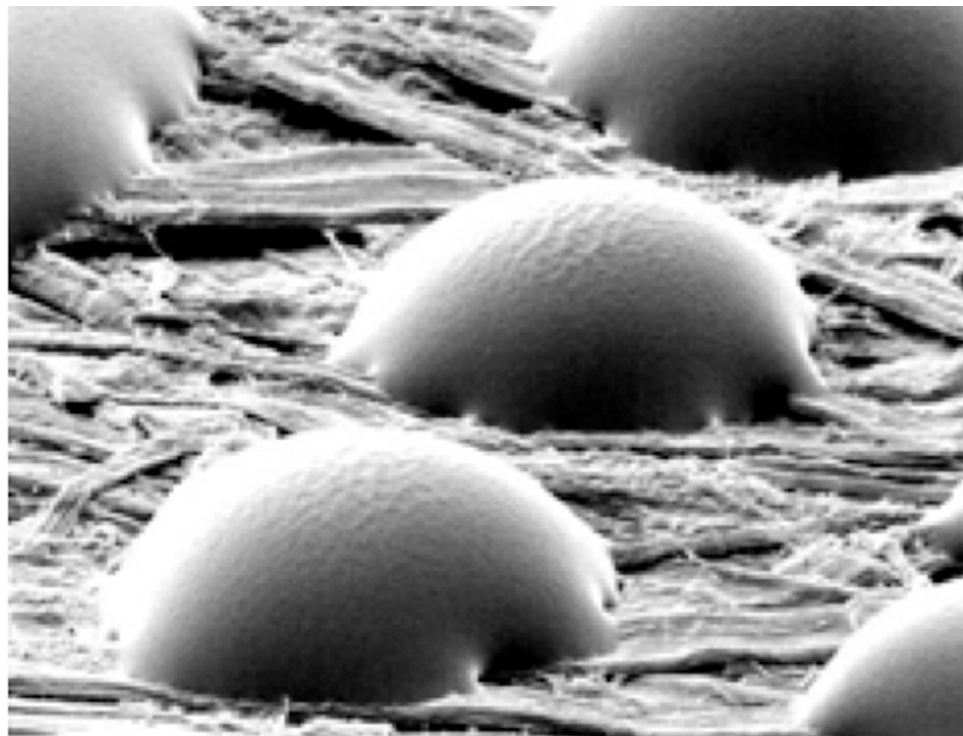
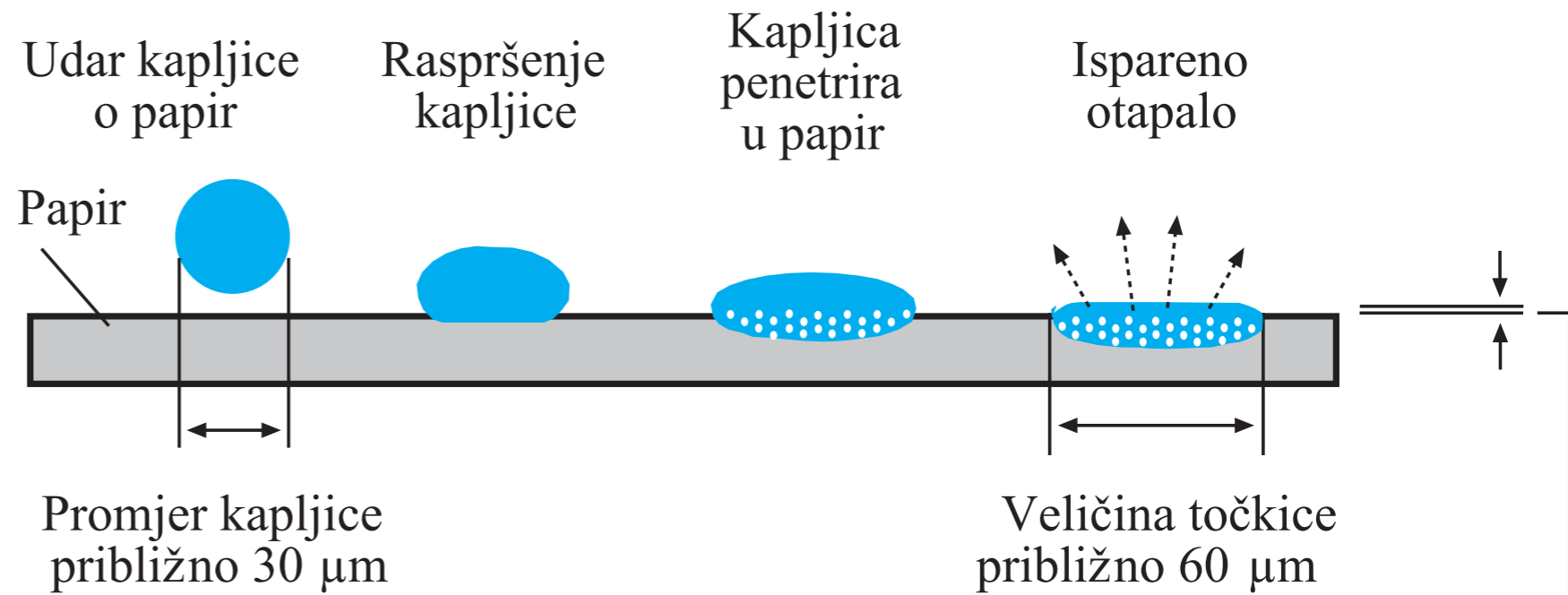
Foto papir



interakcija celulozno vlakno - tekućina

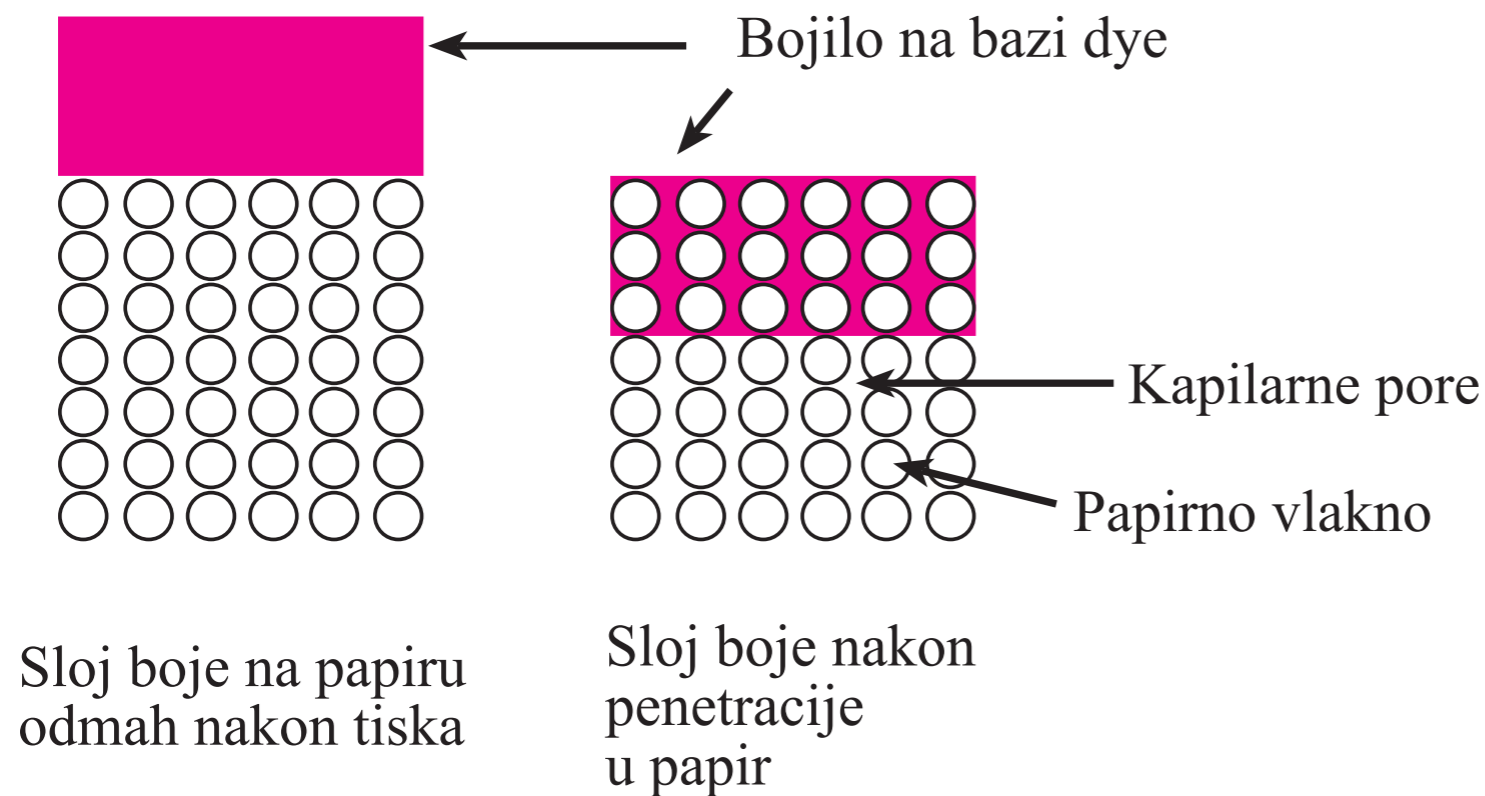


Interakcija Inkjet bojilo - papir



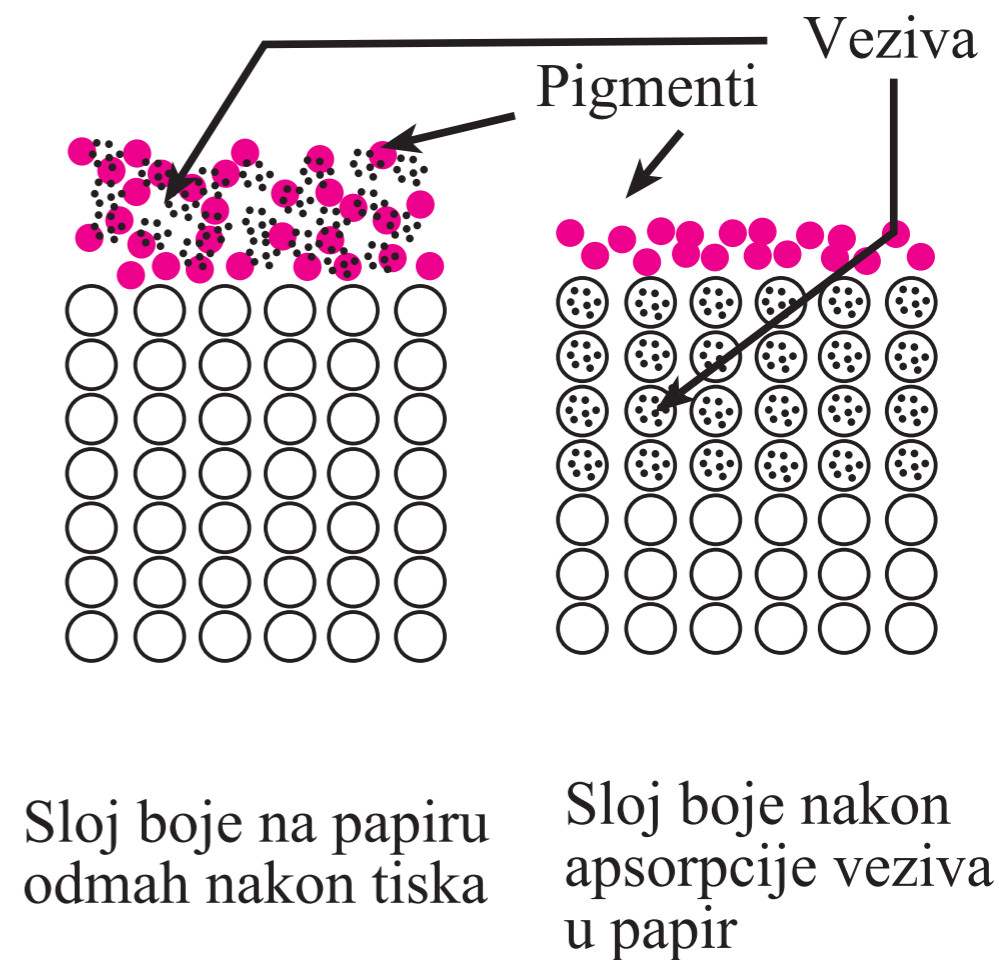
Nanos bojila manji od 1 μm

Interakcija bojilo - tiskovna podloga



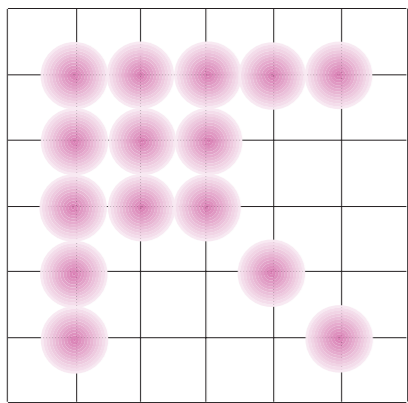
Bojlo na bazi dya

Bojlo na bazi pigmentenata



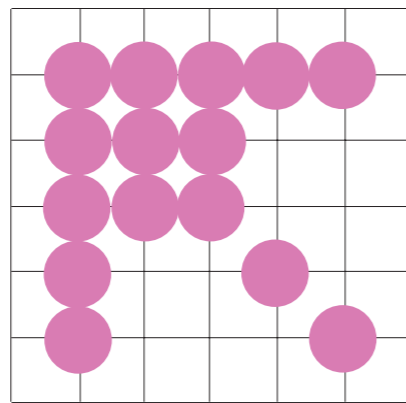
Problemi nastali tijekom nanašanja bojila:

mala gustoć obojenja



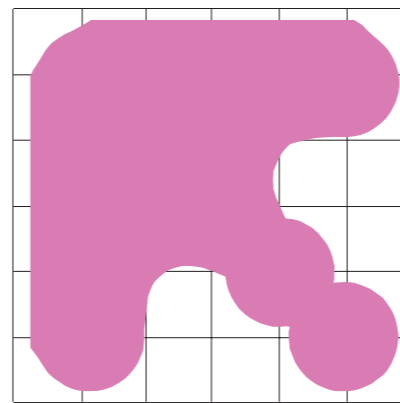
(sivi tekst i ispranost boje)

točkice pre malene



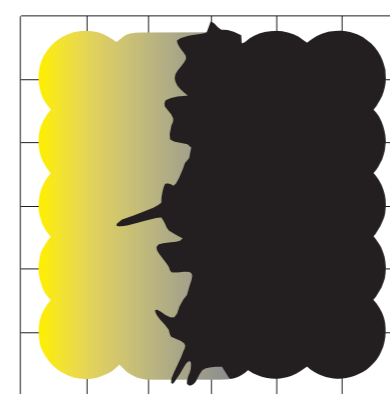
(otvorene linije i ispunjena površina)

točkice pre velike



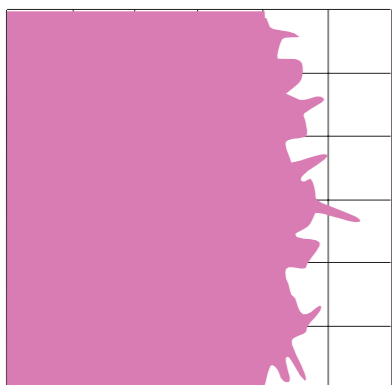
(rascvjetavanje i neravnine "cockle")

kolorno krvarenje



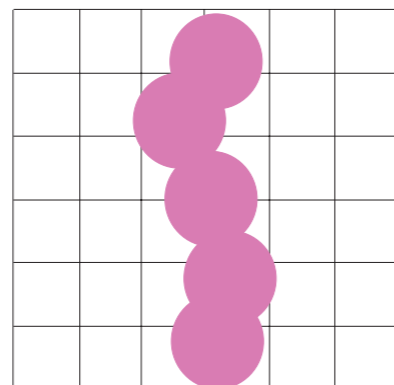
(siromašno obojenje, neizoštrenost rubova)

neizoštrenost rubova



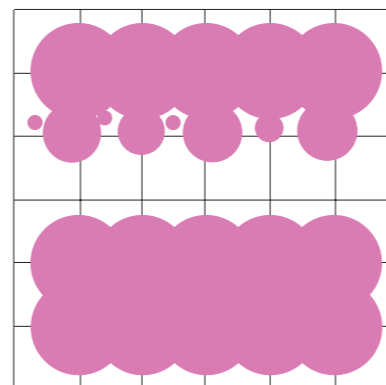
(loš oblik, pernatost)

neujednačenost linija



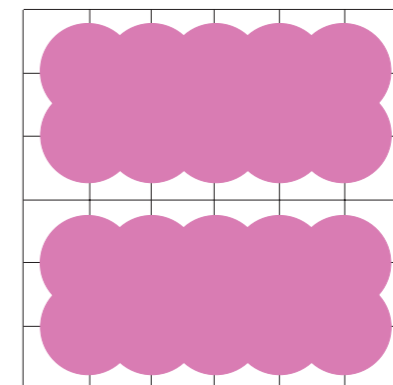
(loš razmještaj točkica)

formiranje traka



(nedostatak ili slabljenje točkica)

formiranje traka



(pogreške pri ulaganju papira)



Hvala na pažnji!