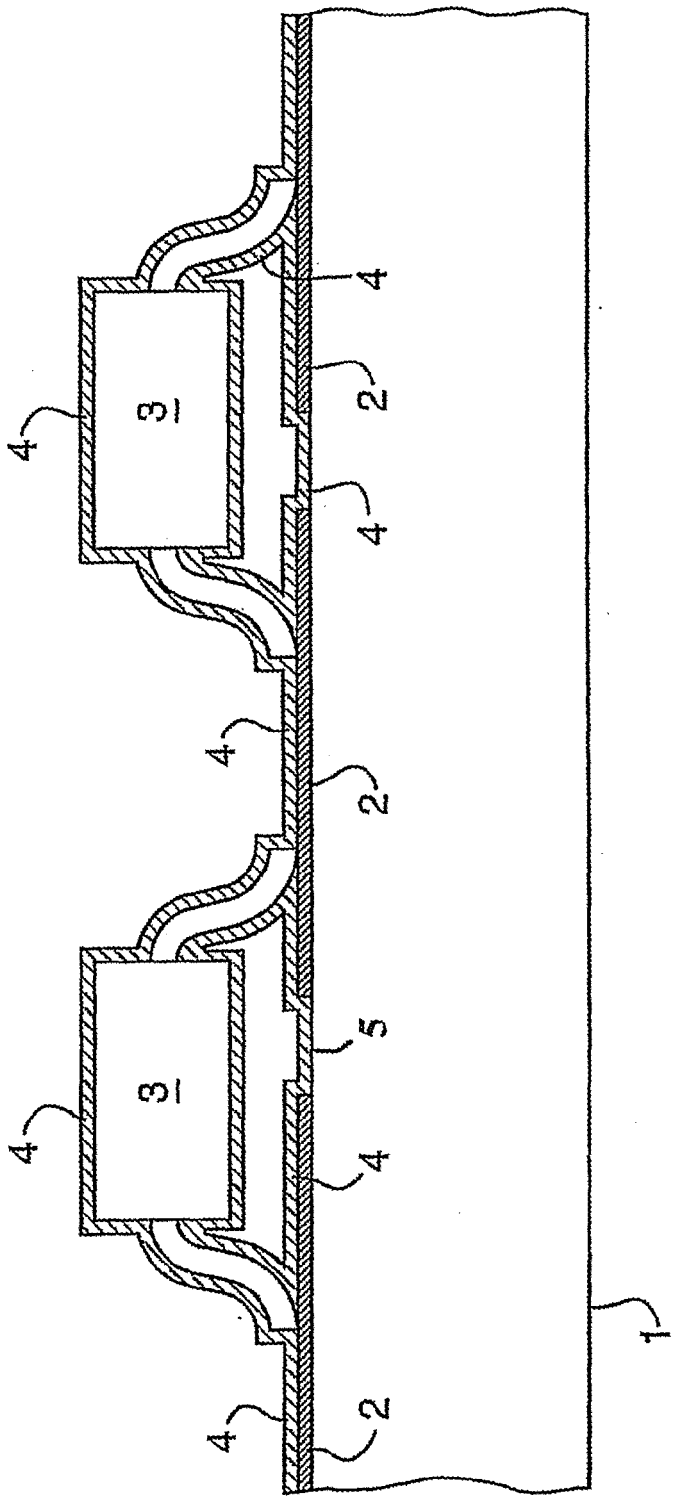

Fig. 1.

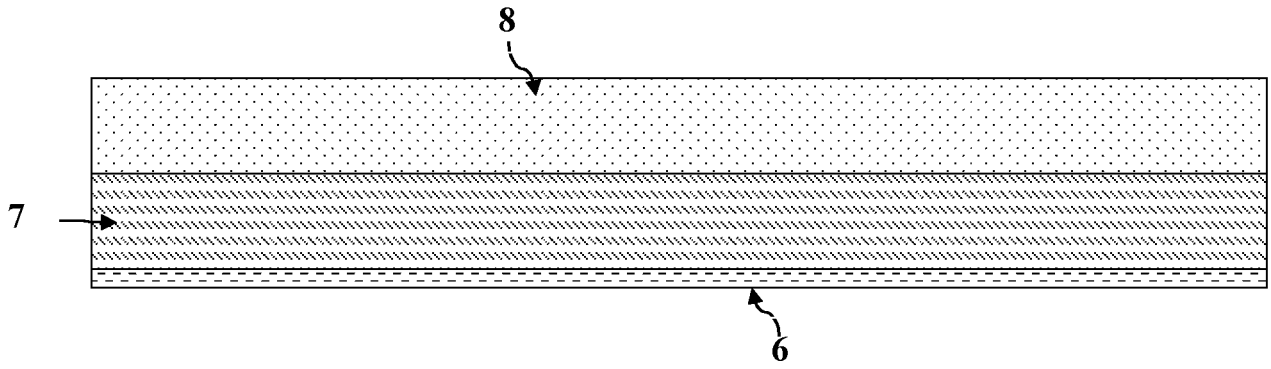

Fig. 2

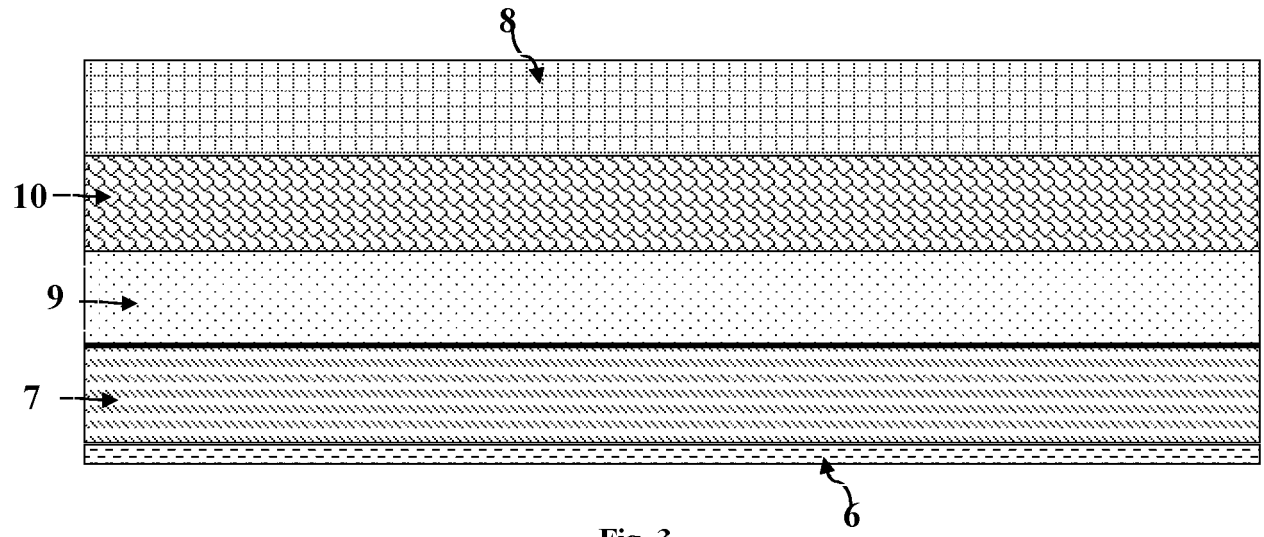

Fig. 3

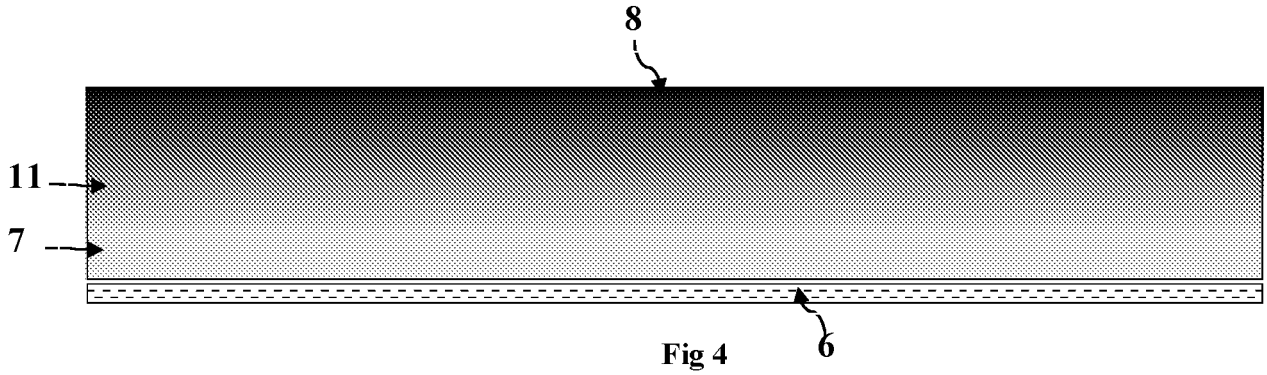

Fig 4

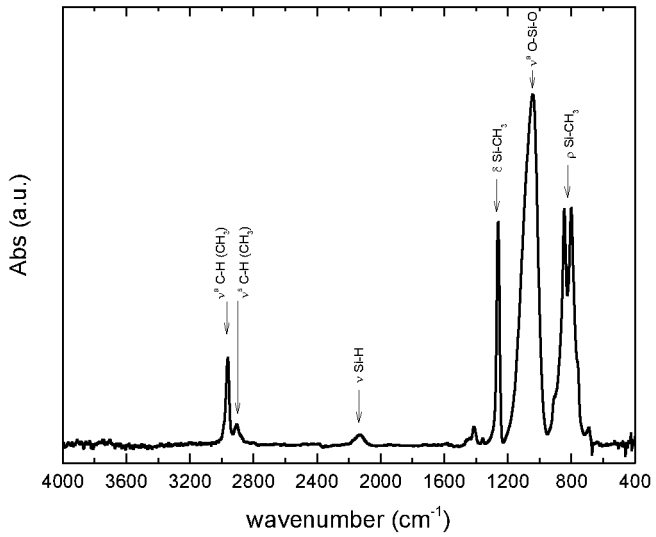
Abs (a.u.)
wavenumber (cm-1)
4000 3600 3200 2800 2400 2000 1600 1200 800 400
νa C-H (CH3)
νs C-H (CH3)
ν Si-H
δ Si-CH3
νa O-Si-O
ρ Si-CH3

Fig. 5

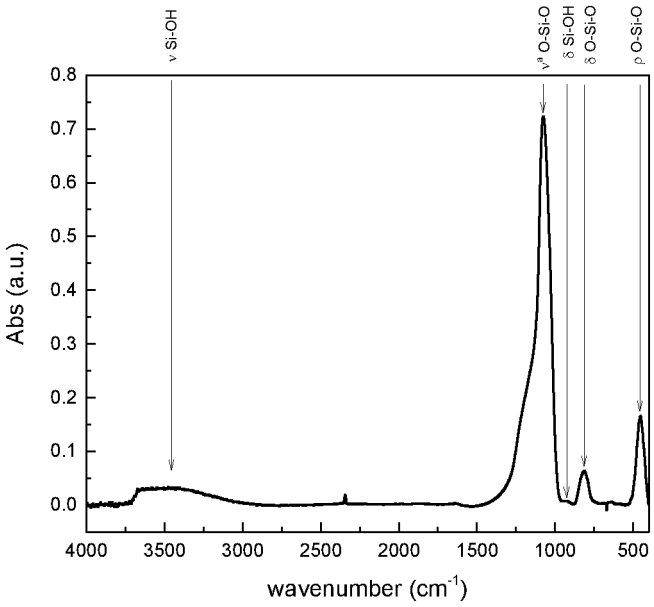
Abs (a.u.)
wavenumber (cm-1)
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8
4000 3500 3000 2500 2000 1500 1000 500
ν Si-OH
νa O-Si-O
δ Si-OH
δ O-Si-O
ρ O-Si-O

Fig. 6

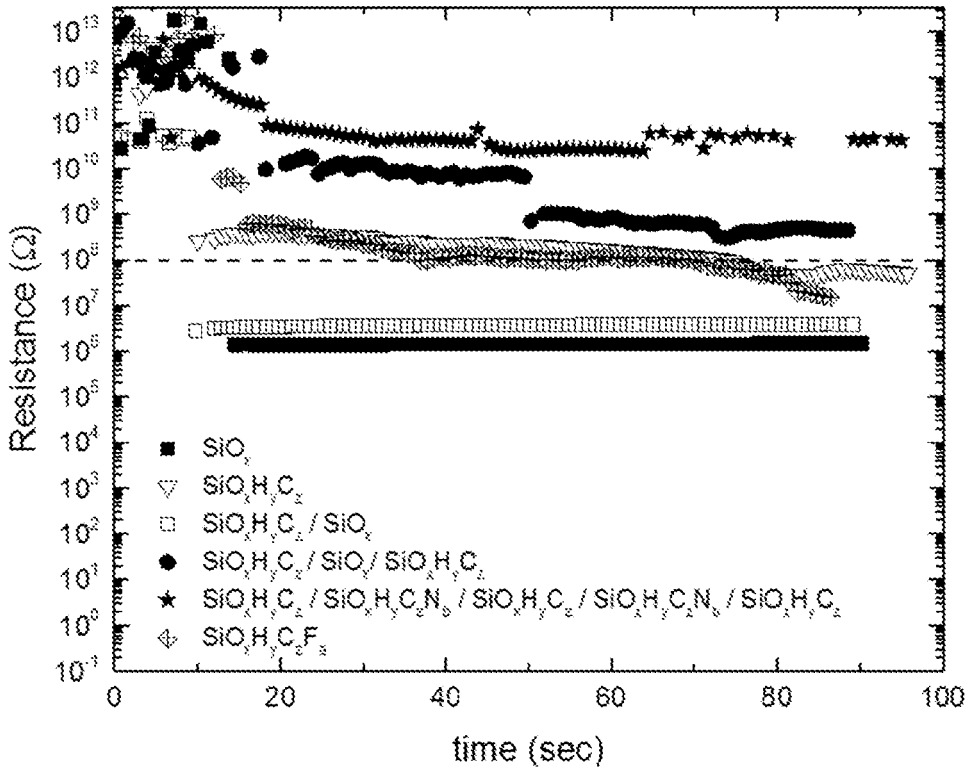
Resistance (Ω)
time (sec)
0
20
40
60
80
100
SiOx
SiOxHyC2
SiOxHyC2 / SiOx
SiOxHyC2 / SiOx / SiOxHyC2
SiOxHyC2 / SiOxHyC2N5 / SiOxHyC2 / SiOxHyC2N5 / SiOxHyC2
SiOxHyC2F5

Fig. 7