I. ?????????????

? ????????? ????? ?? ????? ????? ?????? ?????? ??????? ?????? ???? ?? ?? ??? ?????? ?????? ?????? ?????? ?? ????? ?????????? (ITE) ??? ????? ?????????? ?????????, ??? ?????????????????, ??? ?????????? ???? ??? ?? ????????? ????? ?????? ?????????? ?????? ?????? ?????????? ?????? ?? ??? ? ? ?????? ?????????? ?????????? ???, ?? ??????? ??? ??????? ?? ?????-???. ??????, , ? ????? ?????????? ??? ??????? ?? ??? ??????? ?????? ????????? ??????? ?? ????-???.

? ?????? ??? ?????? ?????????????? ?????? ?? ??????? ????????, ??? ??????:
(i) ? ???????? ????????? ?????? ?????? ????? ?????? ????????????? ?????? ???????? ???????????/??????? ??? ? ???? ?? ?????? ?????? ?????????? ????????? ??????? ?? ????? ??????? ????????????? ?????? ?????? ?????????? ??? 

(ii) ? ????????? ??????????? ?????? ??? ? ????????? ?????????????? ????????? ??????? ????????? ?????? ?????????? ?????? ????????? ?????? ????????? ?????? ?????????????? ?????? ?????????? ????????

? ?????? ??????????? ?? 1986 ?? ??? ?????? ????? ????????????? ????????????? ?????????? ??????????????? ???-V (GaAs, AlAs, InAs) ?? ??? ?????? ?? ????????? ?????? ?????????? ??????? (Molecular Beam Epitaxy, MBE).

???? ????????? ?????????? ?? ?????????? ?? ??? ??? ??????? ?? ?? ????? ?????? ????? ?????????? ??-?????, SiC ?? ??????? ??-V (GaN, AlN, InN), ?? ?? ??????????? ??? ????????? ????????, ?? ?????????? ?? ??? ????????? ?????????? ?? ??????? ?????????? ?????????? ???????????? ????????? ?????? ?????????? ?????????? ?????????????? ??? ?? ????????, ????????????? ????????? ????????? ?????? ?????????? ??????????

?? ?????????? ?? ?????????? ?????????? ?????????? ??????????? ?? ??? ?????????????? ?????????? ????????? ?????????????? ?????????????? ?????????? ?????????????? ?????????????? ?????????? ?????????????? ?????????? ????????? ??????????? (MBE, Si, Al, Ga, In, ???-V)  

(i) GaAs ????????????????????? (MBE, ?????????? ?????????? ?????? ??????? ??? ?????? ?? ??????? III-V ?? Si, ?????? ?????? ??????????? ??????? ?????? (??))

(ii) ?????? ????? ?????????? ???????? ????-V (MBE, ??????????? ??????????? ??? ?????????? ?????????? ?? AlGaAs/GaAs ????-V HFETs, ???????? ????????? ?????????? ??????? InAlGaN ?? ????-V ??-????-??-?????)

(iii) SiC ???????????????????? (?????? Zener ??? MPATT, MBE)

(iv) GaAs ???????????? (????, ???????????, RF MEMS, ?????????? MMIC)
(v) ????????? (???????? ?? ??? ??? ?????? ??? ??????????? ????????? ????????, quantum dots)

??? ?? ??????????????? ??? ?????????? ????????????? ?????????? ???, ? ?????
???????????????????? ??????? ??????????, ??? ???????? ?? ??-???, ?? ??????????
???????? ??????? ????????? ?????????????????, ???????????? ?????????? ??????,
?????????????? ??? ????????? ??????????. ?? ??? ????????? ????? ISO
9001.

II. ????? ?????

? ????? ????? ?????????? ?????????? ??????? ????? ?????? ???????? ??????? (http://tcm.iesl.forth.gr
(1) ?? ????? ??? ?????? ????????? ????????? ??????? ?????? . ? ????? ??????????? ??? ? ?
??? ????? ??????? ?????? ??? ?????? ????????? ????????????? ?? ?? ??? ????????
???????? ????? ?????? ??? ??????? ?? ??? ??????? ??????. ??? ??? ????????? ?????
???? ??????????? ??????? ?? ??? ??????? ??????? ???????? ? ??????????? ???????
??? ???? ????????? ?? ??? ????????, ?????, ????? ????? ????? ??????????????
????. ? ????? ?????????? ?? ????? ????????? ??????? ?? ??????? ???????
??????????? ??????? (Gas sensors), ????????? ????????? (UV sensors), ?????????????
??????????? ??? ??????? Transistor (TFTTs), ??????-??????? ???????????? (Thermo-chromic
devices) ??? ??????? ?????-??????????? ?????????? (Photocatalytic materials)
??????????? . ? ????? ??????????? ?? ????? ??????? ?????? ??????? ?????? ??
???????? ?????? ?? ????????????? ????????????? ????????? ????? ????? ?????????? ???
????????? ???? ????? ??????? ??????? ??????, ????? ????? ??? ????????????? ??
????????? ??? ???? ??????? ??????? ?????????? ?????? ????:

- ????? ?????????? ?????? (?.. CO, H2, CH4, ethanol, propane)
- ???? ?????????? ?????? (?.. NO2, O3, SO2, Cl2)
- ?????? ?????????? ?????-???????????? ?????? ?????? ??? ? ???????????? ??????
? ?? ??????? ?? ?????????? ????????? ????????????? ??????, ?? ???? ?? ?????????????
????, ?? ???? ????? ????????????? ?????????? ????? ????
- ??????? ??? ?????????? ?? ??????? ??????? ??????, ????? ???? ??? ?????????????
?????, ?? ???? ????? UV ???? ?????????? ?????????? ?????
- ???????? ?? ????????????? of n- ??? p-????? ???????? ??????? ??? TCOs ,
ASOs ??? LEDs
- ??????? ?????? ????????? ?????????? ???????? Transitors (TFTTs) ??? ??????? ?????????????
- ??????? ??????-???????? ????? ????-???????????? ????? ?? ??????????
- ?????? ???-????? ??? -??????? ?????????? ?? ??-????????????
????????????? ???????

Source URL: https://www.physics.uoc.gr/el/content/appliedphysics

Links