Small Literature Project – High Speed Devices

For the literature project – you will pick a certain device type for the list, and make a short presentation (5 minutes, ppt) on the lecture on the 4/2.

You need to cover two topics:

- Why are the researchers/companies working on this device.
- Highlight the important device metrics (g_m, f_T, f_{max}, R_{on}, SS..) which are relevant for your device.

And if you can find out:

- What might not be so good with that type of device?

Work in groups of two.

Device Type	Names
InGaAs/InP HEMT	X
InGaAs/InP DHBT	X
InGaAs/InP SHBT	
GaAsSb/InP DHBT	
GaN FETs	
InGaAs MOSFET (quantum well)	X
InGaAs MOSFET (trigate)	X
InGaAs MOSFET (gate all around)	X
InAs Nanowire MOSFET	X
Graphene FET	X
Carbon Nanotube FET	X
MoS_2 FET	

Or pick your own:

Device Type	Names