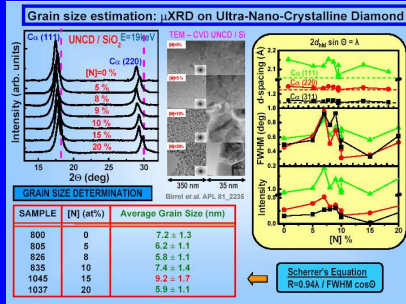
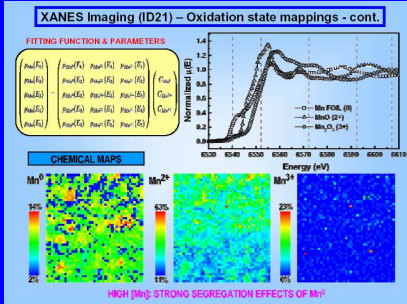
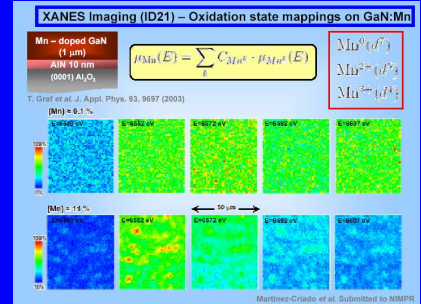
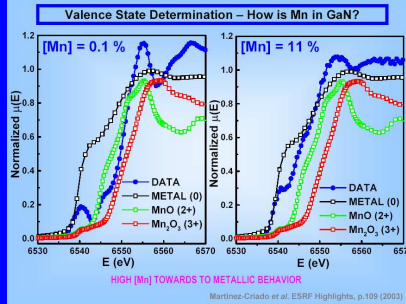
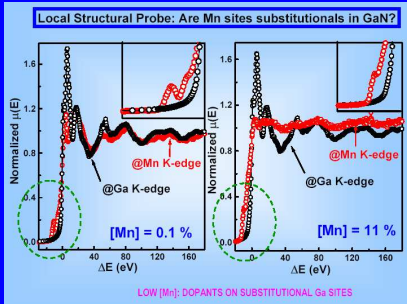
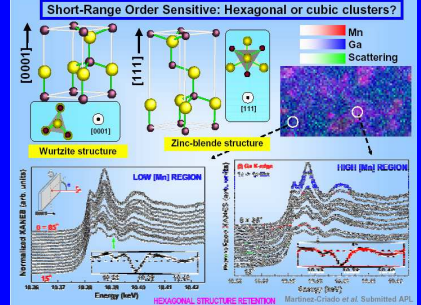
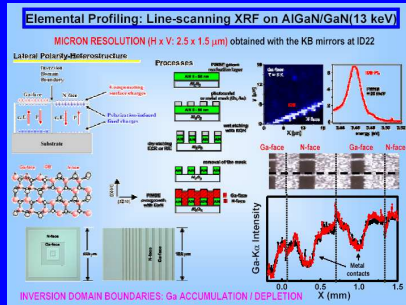
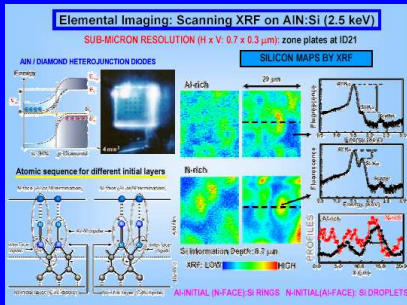
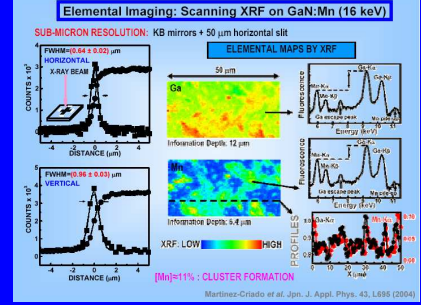
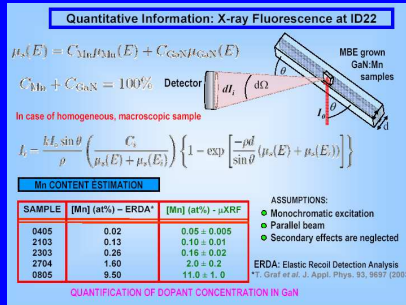
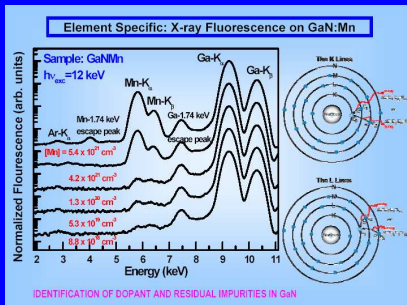
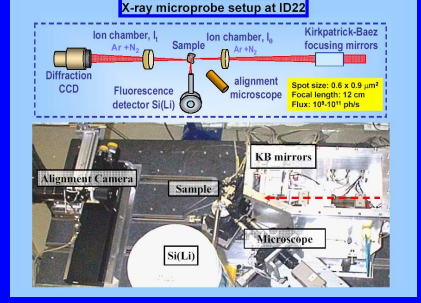
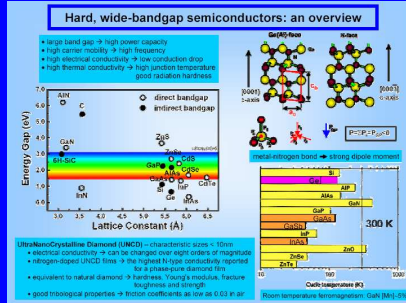
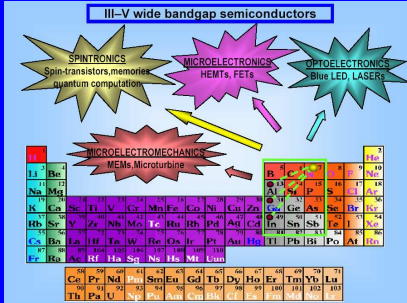


The use of the X-ray Microprobe in hard, wide-band gap semiconductor characterization

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CONCLUSIONS

- Mn doped GaN → successful Mn quantification by μ-XRF at low doping levels; Mn on substitutional Ga sites homogeneous mixture of Mn²⁺ and Mn³⁺ centers at high doping levels; Mn cluster formation with hexagonal symmetry strong spatial distributions of Mn²⁺ and Mn³⁺
- Si doped AlN → droplets or ring-like features depending on the initial atomic sequence (N-rich or Al-rich)
- Lateral polarity samples → accumulation or depletion of Ga deposition at inversion domain boundaries
- N doped UNCD → grain size in the range of 5-9 nm depending on N content