

Asst. Prof. Martial Duchamp "we can understand better what we see"

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Elastic distortion determining conduction in BiFeO₃ phase boundaries



K.M. Holsgrove, M. Duchamp et al., RCS Advances (2020)



Investigation of the magnetization dynamics of YIG



Study of the fundamental properties of 2D materials and devices at atomic scale



Study of the fundamental properties of 2D materials and devices at atomic scale



Magnetic imaging vs temperature and field





Study of the fundamental properties of 2D materials and devices at atomic scale



\rightarrow Atomic level imaging of local atomic coordination.

Q.M. Ramasse et al. Nanoletters 13 (2013) 4989



Study of the fundamental properties of 2D materials and devices at atomic scale



\rightarrow Atomic-scale quantification of charge densities in two-dimensional materials.

K. Müller-Caspary, M. Duchamp et al. PRB 98, 121408(R) (2018)



Study of the fundamental properties of 2D materials and devices at atomic scale



SiC / graphene interface grown at high temperature

Evolution of the C fine structure. Atomic mapping of the sigma to pi transition.



Laboratory for *in situ* & *operando* nanoscopy Study of the fundamental properties of 2D materials and devices at atomic scale





K. Bogaert et al., submitted