

Dr David A. J. Moran, University of Glasgow

Dr David A. J. Moran attained his degree in Physics with Honours at the University of Glasgow in 2000 and continued to pursue his PhD specialising in short gate length III-V HEMT technology which he received in 2004. During his PhD research, his pioneering approach to III-V material design and device processing led to the demonstration of the highest frequency performance (f_T) and transconductance reported for a lattice-matched InP device. Between 2004 and 2007, David worked as a Research Associate at the University of Glasgow co-ordinating the device activity of the EPSRC funded project “Sub 100nm III-V MOSFET's for Digital Applications”. This led to demonstration by David and his team of the first high performance surface oxide III-V transistor with high carrier mobility, high transconductance and enhancement mode operation. In 2007 David was awarded an EPSRC Advanced Research Fellowship for the investigation of “Ultra short gate length diamond FETs for high power/high frequency applications” and subsequently formed the Nano-Electronic Diamond Devices and Systems (NEDDS) group within the Electronic and Nanoscale Engineering Research Division at the University of Glasgow. David and his research team have since pushed the boundaries of diamond FET research, minimising device feature size to that previously un-achieved, demonstrating the highest frequency performance (f_T) for a diamond transistor and promoting greater understanding of the current limitations and potential of diamond based electronics.