



Prof. Antonio H. Castro Neto

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Prof. Antonio H. Castro Neto is a materials scientist and condensed matter theorist who is achieved world recognition for his works in rare earths, actinides, and two-dimensional (2D) materials such as transition metal dichalcogenides, and graphene.

Professor A. H. Castro Neto obtained his Ph.D. in Physics at University of Illinois at Urbana-Champaign, USA, in 1994. During his Ph.D., Prof. Castro Neto worked on the fundamentals of the theory of metals, magnets, and superconductors. In 1994, he moved to the Institute for Theoretical Physics at the University of California at Santa Barbara, USA, as a postdoctoral fellow. There he worked on the physics of low dimensional materials. In 1995, he became an Assistant Professor at University of California where he published influential papers on the effects of disorder in the properties of metallic alloys of rare earths and actinides. Since 2000, he has been at Boston University as Professor of Physics where he was the Director of the Condensed Matter Theory program. In Boston, Prof. Castro Neto became the leading theorist in the study of graphene and a collaborator of Prof. Sir Andre Geim and Prof. Sir Konstantin Novoselov, winners of the 2010 Nobel Prize in Physics for the discovery of graphene.

In 2010, Prof. Castro Neto created and became the Director of the Graphene Research Center (GRC). He is a Distinguished Professor at the National University of Singapore (NUS). GRC was initially supported by a \$40 M grant from NUS. From 2011 to 2014, GRC was able to attract more than \$ 60 M of funding from the industry and agencies such as the National Research Foundation of Singapore (NRF). GRC has generated 5 spinoff companies since 2010. In 2014, Prof. Castro Neto was awarded a grant of \$ 50 M from NRF to create the Centre for Advanced 2D Materials (CA2DM). CA2DM involves more than 150 researchers including 50 Professors from science and engineering. GRC is one of the first and the best known research centre in the world to explore the properties of graphene. CA2DM will explore two-dimensional crystals beyond graphene and their industrial applications in several different industrial sectors such as energy, water, food, and environment.

In 2003, Prof. Castro Neto was elected a fellow of the American Physical Society (APS) for his contributions to the theory of strong correlations, fluctuations, and inhomogeneities in high temperature superconductors and quantum magnets. In 2012, he was elected fellow of the American Association for the Advancement of Science (AAAS) for path breaking contributions to theoretical condensed matter physics, particularly in identifying and elucidating the role of Dirac electrons in graphene. He is also the colloquia Editor for Reviews of Modern Physics, the scientific journal with highest impact factor. Prof. Castro Neto was awarded the 11th Ross J. Martin Award by the University of Illinois at Urbana-Champaign, the University of California Regent Fellowship, the Alfred P. Sloan Research Fellowship, the Miller Professorship by the University of California at Berkeley, and the Gordon Godfrey Visiting Professorship at the University of New South Wales, Sydney, Australia, the Distinguished Visiting Chair Professorship at the SKKU Advanced Institute of Nano-Technology (SAINT), South Korea, and the Hsun Lee Award by the Institute of Metal Research at the Chinese Academy of Sciences.

Prof. Castro Neto has authored more than 250 manuscripts and has published in prestigious journals including Science and Nature and has close to 30,000 citations. Prof. Castro Neto has given more than 300 seminars worldwide. Prof. Castro Neto has co-developed more than 20 invention disclosures and patents. His research has spanned a broad range of topics in materials science and condensed matter.