Nanotechnology has potential applications in many fields from commodity goods to space shuttles, agriculture to medicines, textiles to security and so on. Applications of nanotechnology in electronic industry to biomedical engineering has made devices more comfortable and personalized. Application of nanotechnology in agriculture and food sectors showed excellent improvement in crops production and food preservation, food packaging and supply chains. Most importantly, nanotechnology can contribute to pollution control and wastewater treatment, making water accessible to all. Incorporation of nanomaterials into solar panels opened the doors to fight against climate change. Nanotechnology can effectively reduce carbon emission and water salinity. New sophisticated sensors and devices can ensure social security and environmental pollution control. Thus nanotechnology has great potential to achieve the Sustainable Development Goals (SDGs) in many ways.

Center for Nanotechnology Research (CNR) is a specialized research center involving multidisciplinary sciences and technologies at American International University-Bangladesh (AIUB). The center was established in March, 2020 with the aim of conducting research in the area of nanotechnology to solve the national problems using local resources targeting to contribute to achieving the Sustainable Development Goals (SDGs) by 2030. As the CNR is in its early stage so multidisciplinary research on nanoelectronics, nanomaterials, nanomedicines, nanoagriculture, nanomanufacturing and green nanotechnology is its future plan which will adversely contribute to achieving SDGs. CNR has published research articles on nanomaterials for solar cell applications in collaboration with local and foreign universities. Research on Nanosensors for environmental remediation is underway in collaboration with local university. CNR has been established to achieve high level of scientific knowledge and committed to produce potential manpower who can involve in achieving SDGs. This center is directly patronized by the AIUB management.

In addition to research activities, CNR regularly arranges seminar, webinars and symposium on nanotechnology, and collaborates with companies and scientists from AIUB and other local and foreign organizations. The first International Symposium on Nanotechnology (ISN2020) held in March 12, 2020 was its first attempt to organize an international scientific get-together to share the latest knowledge about nanotechnology. The second International Symposium on Nanotechnology has been held virtually on January 24, 2022 and the theme of symposium is “Nanotech for SDGs”.

The center communicates with various national and international private-government agencies to collect fund for research and related collaborations. The ongoing research project on “Surface modification and characterization of carbon quantum dots (CQDs) for solar cell Application” is funded by the Ministry of Science and Technology, Bangladesh. Research and development on Solar Cells can contribute to SDGs in many ways.

CNR possess some commonly used apparatus at its early stage. Major characterization processes are carried out in collaboration with some other institutes. CNR has built a comfortable connection with national and international scientist and companies. There are scopes in CNR to work together with other research group, national and international scientists of similar interests.

Some representative photos involving CNR and its activities: