

A Brief Biography of Dr. P. A. Naik, Director, RRCAT



Dr. Prasad Anant Naik, Distinguished Scientist & Head, Laser Plasma Division and Indus Synchrotrons Utilization Division, Raja Ramanna Centre for Advanced Technology (RRCAT), Indore took over as Director, RRCAT on 31st August 2016 from Dr. P. K. Gupta, who retired on superannuation on that day. Dr. Naik is an internationally known laser scientist and he has outstanding contributions in the fields of laser plasma interaction, high-power lasers, capillary discharge plasma, plasma diagnostics systems, x-ray laser etc. Dr. Naik was born on March 17, 1959 at Nerul in Goa. He received B.Sc. degree in 1979 from University of Mumbai securing First rank. He then joined IIT, Bombay for M.Sc. (Physics) degree, where again he secured First rank in 1981. Dr. Naik joined the 25th batch of BARC Training School, Mumbai, in August 1981. In BARC Training School also, he was the overall batch topper and was awarded *Homi Bhabha Prize and Gold Medal*. After graduating from BARC Training School in 1982, Dr. Naik joined Laser Division of BARC. In 1990, Dr. Naik moved from BARC to RRCAT, which at that time was in its infant stage. At RRCAT, he contributed in setting up of an ultra-intense laser plasma interaction laboratory of international standards. In 1992, he was awarded Ph.D. degree by Mumbai University on his dissertation titled "*X-ray spectroscopic studies of laser produced plasmas*". From 1993 to 1995, he worked as an "NSERC Canada International Fellow" at University of Alberta, Edmonton, Canada. At RRCAT, he has contributed in building up of three high-power laser chains including a table top terawatt laser, development of various diagnostics for laser-plasma interaction studies, carrying out several experimental investigation to study various processes in laser-plasma interaction viz. Opacity optimization of mix-Z targets, Harmonic generation from solid surfaces, X-ray line intensity enhancement, Light scattering and x-ray generation from gas cluster plasma, Intense x-ray generation from vacuum discharge, Cylindrical plasma for x-ray lasing, X-ray laser, Laser based acceleration of electrons, protons and neutrals, etc. He has more than 550 research publications to his credit of which 177 are published in peer-reviewed journals. For his remarkable achievements in the areas of lasers and plasma, he was awarded *Homi Bhabha Science & Technology Award* by DAE in 2002. For his outstanding contributions, DAE has awarded *Group Achievement Awards* to his team for four times in 2010, 2011, 2012 and 2015 for Ultrashort pulse laser-plasma interaction, X-ray laser, OPCPA based 40 TW Laser system, and Enhanced usage of Indus beamlines, respectively. Dr. Naik has taught in BARC Training School at RRCAT for several years and has been involved in several human resource development activities at the Centre. He was awarded *Distinguished Faculty Award* in 2015 by Homi Bhabha National Institute (HBNI).