



भारत सरकार / Government of India
परमाणु ऊर्जा विभाग / Department of Atomic Energy
होमी भाभा राष्ट्रीय संस्थान / Homi Bhabha National Institute
राजा रामन्ना प्रगत प्रौद्योगिकी केन्द्र
Raja Ramanna Centre for Advanced Technology



HBNI Faculty Profile

Name	<i>Prabhat Kumar Gupta</i>	
Designation	<i>Associate Professor</i>	
Research Area	<i>Cryogenic Engineering, Heat Transfer, Thermodynamics, Heat Exchangers, Helium Liquefier</i>	
Research Profile	Prabhat K Gupta has over two decades experience in practical cryogenics. He obtained his PhD in Mechanical Engineering in 2009. He is presently working in large scale helium cryogenics set-up for testing SCRF cavities operating at 2 Kelvin. His most recent research work includes 2 Kelvin refrigeration cycles, 2 K heat exchangers, helium purification and freeze-out heat exchangers, liquefaction cycles.	
Ten Selected Recent Publications		
1.	Jain Geet, Chaudhary Sharad , Gupta Prabhat Kumar , Kush PK. Flow mal-distribution study in cryogenic counter-flow plate fin heat exchangers. IOP Conf. Series: Materials Science and Engineering 171 (2017).	
2.	Gupta Prabhat Kumar , Rabehl Roger. Design guidelines for avoiding thermo-acoustic oscillations in Helium piping systems. Applied Thermal Engineering. 2015; 84: 104-109.	
3.	Gupta Prabhat Kumar , Rabehl Roger. Numerical modeling of a 2 K J-T heat exchanger used in Fermilab Vertical Test Stand VTS- 1 . Cryogenics 2014;62:31-36,	
4.	Gupta Prabhat Kumar , Nema Vivek Kush PK.Comparative design evaluation of plate fin heat exchanger and coiled finned tube heat exchanger for helium liquefier in the temperature range of 300-80 K. Indian Journal of Cryogenics 2015; Volume 40, Issue 1 .	
5.	Gupta Prabhat Kumar , P.K.Kush and Ashesh Tiwari. Experimental Studies on Pressure Drop Characteristics of Cryogenic Cross-Counter Flow Coiled Finned Tube Heat Exchangers. Cryogenics 2010; 50: 257-265.	
6.	Gupta Prabhat , Kush PK. Indigenous development of coiled finned tube heat exchangers.Indian Journal of Cryogenics 2010 ; 35 A: 437-440	



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7.	Gupta Prabhat Kumar , P.K.Kush and Ashesh Tiwari. Experimental Research on Heat Transfer Coefficients for Cryogenic Cross-Counter Flow Coiled Finned Tube Heat Exchangers. International Journal of Refrigeration 2009; 32:960-972
8.	Gupta Prabhat Kumar , Kush PK,Tiwari A.Second law analysis of Counter flow cryogenic heat exchangers in presence of ambient heat-in-leak and longitudinal conduction through wall. Int. Journal of Heat and Mass Transfer 2007; 50:4754-4766.