

## CERTIFICATE

This is to certify that the dissertation entitled “**Ternary  $\text{MnCo}_2\text{O}_4$  Spinel Nanofiber Prepared By Electrospinning Process As New Battery-Type Electrode For Supercapatteries**” that is being submitted by **S. PUSHPALATHA (18PHP041)** during 2019 – 2020 in partial fulfillment for the award of Master of Science in Physics to the **KARPAGAM ACADEMY OF HIGHER EDUCATION** is a record of bonafide work carried out by her under my guidance and supervision. The contents embodied in the dissertation have not been submitted for the award of any other degree or diploma in this or any other university.



**Signature of Supervisor**

Dr. N. Padmanathan  
Assistant Professor



**Head of the Department**

Dr. E. Siva Senthil  
Associate Professor

Head of the Department  
Department of Physics  
Faculty of Arts, Science and Humanities  
Karpagam Academy of Higher Education  
Coimbatore – 641 021, Tamil Nadu, India.