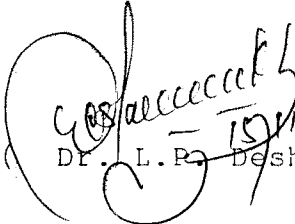


C E R T I F I C A T E

This is to certify that the dissertation entitled " DEPOSITION AND CHARACTERISATION OF Bi_2S_3 THIN FILMS AND THEIR USE IN PEC CELLS "; submitted to the Shivaji University , Kolhapur , for the award of the Degree of Master of Philosophy in Physics , embodies the results of a bonafide research carried out by Shri. Zipare K.V., under my guidance and supervision and that no part of the dissertation has been or is being submitted for any degree or diploma. The assistance and help received during the course of this investigations have been acknowledged.

Solapur

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Dr. L. P. Deshmukh)