

DEVELOPMENT AND STUDIES OF COAL ASH POLYMER COMPOSITE

MAJOR PROJECT- REPORT SUBMITTED FOR THE AWARD OF THE DEGREE OF

MASTER OF TECHNOLOGY

in

POLYMER TECHNOLOGY

Submitted By

Ankur Sharma

(2K15/PTE/03)



Under the supervision of

Dr Ram Singh

Department of Applied Chemistry
Delhi Technological University, Delhi-110042
July 2017

DECLARATION

I, **Ankur Sharma**, hereby certify that the work which is being submitted in this major project report entitled “**Development and studies of coal ash polymer composite**” in the partial fulfilment for the award of the degree of Master of Technology (Polymer Technology) at **Delhi Technological University** is an authentic record of my own work carried out by me under the supervision of **Dr Ram Singh** (Assistant Professor, Department of Applied Chemistry, Delhi Technological University, Delhi).

I, further declare that the project report has not been submitted to any other Institute/University for the award of any degree or diploma or any other purpose whatsoever. Also it has not been directly copied from any source without giving its proper reference.

Ankur Sharma

2K15/PTE/03
Master of Technology (Polymer Technology)
Department of Applied Chemistry
Delhi Technological University
Delhi, India.

CERTIFICATE

This is to certify that the M.Tech. major project entitled “**Development and studies of coal ash polymer composite**” submitted by **Ankur Sharma** [2K15/PTE/03] for the award of the degree of “**Master of Technology in Polymer Technology**” is carried out by him. He has worked under my supervision.

Dr. Ram Singh

Assistant Professor

Department of Applied Chemistry

Delhi Technological University

Delhi - 110042

Prof. Archana Rani

Head of the Department

Department of Applied Chemistry

Delhi Technological University

Delhi - 110042

ACKNOWLEDGEMENT

I would like to pay my heartiest thanks to my supervisor Dr. Ram Singh for his continuous motivation, healthy scrutiny and encouragement without which this feat would not have been possible.

I am also grateful to Prof. Archana Rani, Head of the Department, Department of Applied Chemistry, Delhi Technological University, for providing me the constant support for this project work.

I would also like to thank the faculty members Prof. D. Kumar, Prof RC Sharma, Dr. S. G. Warkar, Dr. Richa Srivastava, Dr. D. Santhya, Dr. Anil Kumar, Dr. Roli Purwar, Dr. Raminder Kaur, Dr Jay Singh and Dr CM Pandey, for their support and encouragement throughout the course of this project.

I would also like to continue by thanking to the Research Scholars of my lab and Non-teaching staff of the Department for their help.

Ankur Sharma

Contents

	Page Number
1. Introduction	1
2. Experimental Section	9
3. Results and Discussion	15
4. Conclusions	24
5. References	26