

Major Project Report

ON

Biomass waste-derived activated carbon electrode materials for super-capacitor applications

Submitted in partial fulfilment of the requirement for the award of

BACHELOR OF TECHNOLOGY

IN

CHEMICAL ENGINEERING

SESSION 2024-25

SUBMITTED BY-

G Madhavi (21021118)

Himanshu Anuragee(21021121)

UNDER THE SUPERVISION OF-

Mr. Satyajit Bhattacharjee

(Assistant Professor) Department of Chemical
Engineering, SOS Engineering & Technology,
Guru Ghasidas Vishwavidyalaya



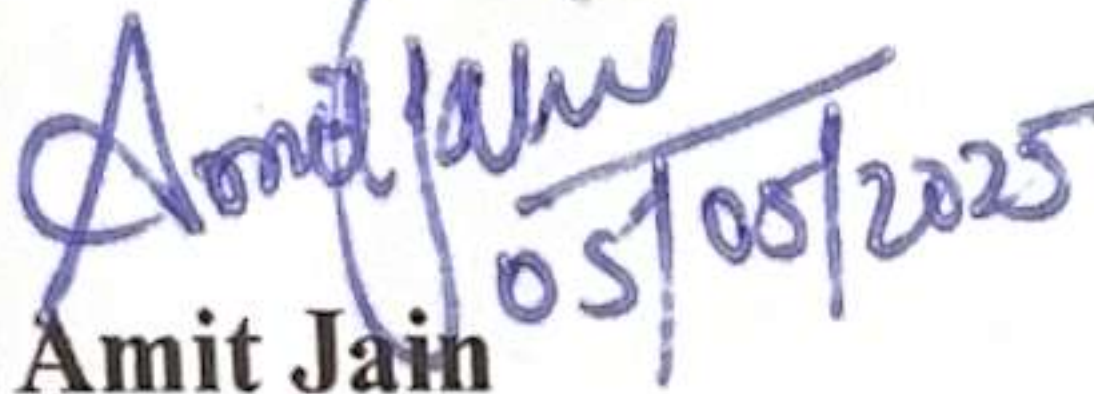
SCHOOL OF STUDIES OF ENGINEERING & TECHNOLOGY

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR, (C.G.), INDIA MAY, 2025

Certificate of Approval

is to certify that the work which is being presented in the B.Tech. Major Project Report entitled **“biomass waste derived activated carbon electrode materials for supercapacitors applications”** partial fulfilment of the requirements for the award of the Bachelor of Technology in Chemical Engineering and submitted to the Department of Chemical Engineering, Institute of Technology, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, Chhattisgarh, India is an authentic record of bonafide and original work carried out during a period of January 2025- May 2025 under the supervision of **Mr. Satyajit Bhattacharjee, Assistant Professor of Chemical Engineering Department.** The matter presented in this project report does not include any material that has been submitted by anyone else for the award of any other degree elsewhere.

APPROVED BY


Dr. Amit Jain

Professor

Head of Department

Department of Chemical

Engineering

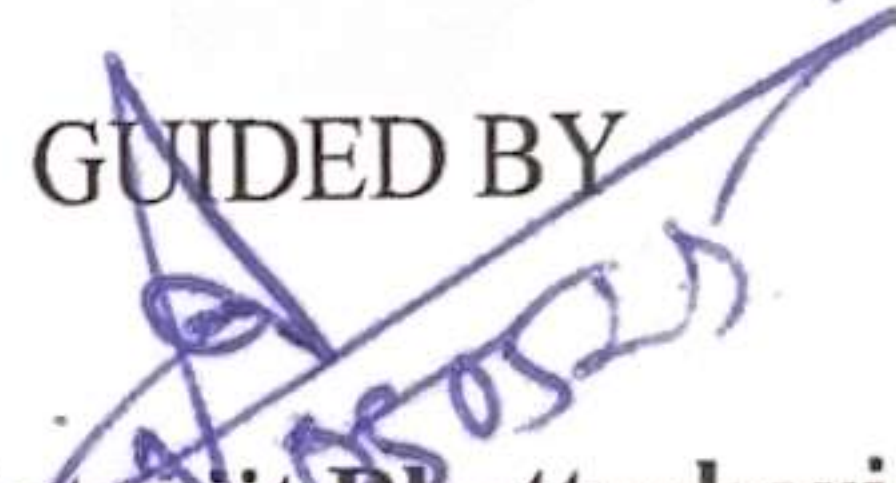
School of Studies of Engineering

& Technology

Guru Ghasidas Vishwavidyalaya,

Bilaspur (C.G.)

GUIDED BY


Mr. Satyajit Bhattacharjee

Assistant Professor

Department of Chemical

Engineering

School of Studies of Engineering

& Technology

Guru Ghasidas Vishwavidyalaya,

Bilaspur (C.G.)

Signature

Signature

INDEX

Title	Page
Declaration	2
Certificate	3
Acknowledgement	4
Index	5
Abstract	6-7
Chapter - 1	
Introduction	8-10
Chapter - 2	
Literature Review	11-12
Chapter - 3	
Activated Carbon	13-15
Chapter - 4	
Methodology for carbon electrode manufacturing	16
Chapter - 5	
Results and Conclusion	17-21
Chapter - 6	
Future Aspects	22-24
References	25-27