Preface

This thesis presents an efficient, cheap and alternative technique for treatment of dye (Direct Blue 199) contaminated wastewater. In India alone, dyestuff industries produce around 60,000 metric tons of dyes, which is approximately 6.6% of total colorants used worldwide. Textile and carpet industries are big consumers of dyestuff and discharge a huge amount of dye loaded water. Dyes in water cause severe damage to the environment and human life due to their non-biodegradability and high toxicity.

In India, carpet industries are clustered in Bhadohi, Uttar Pradesh. Author of thesis is a native of Bhadohi. So, he decided his research objective to remove/reduce dye from the dye contaminated wastewater by the best and cheap technique and bring wastewater within the permissible limit of environmental norms before discharge.

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I am thankful to **Champa Dyeing Limited**, Bhadohi, Uttar Pradesh, India for allowing me to collect dye loaded wastewater from the vat within the industry.

In present thesis, the work was done with single dye (Direct Blue 199) since it is used very frequently in carpet industries but this technique can also be applied to remove/reduce other similar dyes form the wastewater.

So, it is hoped that this PhD work will help to clean one of the most undesirable pollutant of water. For ease of understanding to the readers, this thesis has divided in five chapters.

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