

Coagulation and Flocculation in Water and Wastewater Treatment – Third Edition

Coagulation and Flocculation in Water and Wastewater
Treatment provides a comprehensive account of coagulation
and flocculation techniques and technologies in a single
volume covering theoretical principles to practical applications.

Thoroughly revised and updated this new edition has been progressively modified and increased in scope to cater for the requirements of practitioners involved with water and wastewater treatment.

New topics in this new edition include:

- activated sludge bulking and foaming control and enhanced bioflocculation;
- algae removal and harvesting;
- dissolved organic nitrogen (DON) removal;
- inorganics removal;
- turbidity and its measurement;
- wastewater treatment by coagulation and chemically enhanced primary treatment (CEPT).

The book presents the subject logically and sequentially from theoretical principles to practical applications. Successive chapters deal with, in turn, properties of materials present in waters and wastewaters; characteristics and types of coagulants commonly in use; mechanisms and practical implications of destabilization of waterborne material using metal coagulants and polyelectrolytes; considerations and requirements for coagulant addition at the rapid mixing stage; theoretical and practical considerations of flocculation; and details of experimental procedures for assessing primary coagulants, flocculant aids, sludge conditioners, and flocculation parameters. Numerous examples are included as appropriate.

Treatment and disposal of sludges resulting from coagulation-flocculation related operations is dealt with in an Appendix. This important topic has been separated from the main text to avoid disturbing the continuum of the presentation.

Coagulation and Flocculation in Water and Wastewater Treatment is a readable and useful resource for the water scientist and engineer. It is a convenient reference handbook providing numerous examples and appended information and it is a vital text for course material for undergraduate and postgraduate students.

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