

**AN INTRODUCTION TO THE  
CHEMISTRY OF COLLOIDS: A  
COMPENDIUM OF COLLOIDAL  
CHEMISTRY FOR STUDENTS,  
TEACHERS, AND WORKS MANAGERS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649029648

An Introduction to the Chemistry of Colloids: A Compendium of Colloidal Chemistry for Students, Teachers, and Works Managers by Viktor Pöschl & Herbert H. Hodgson

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**VIKTOR PÖSCHL & HERBERT H. HODGSON**

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*A COMPENDIUM OF COLLOIDAL CHEMISTRY FOR  
STUDENTS, TEACHERS, AND WORKS MANAGERS.*

BY

DR. VICTOR PÖSCHL.

Translated from the Second, Enlarged, German Edition

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LONDON:

CHARLES GRIFFIN AND COMPANY, LIMITED.

PHILADELPHIA: J. B. LIPPINCOTT COMPANY.

1910.

## INTRODUCTION.

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UNTIL a few years ago the Colloids obtained but little recognition in General and Inorganic Chemistry, being infrequently, and then only imperfectly, mentioned.

A chemist, realising the importance of Colloidal Chemistry and desiring to become better acquainted with this interesting chapter of science, must have recourse to the whole of the special literature of the subject, a matter not always possible, and there has been no short compendium of the subject.

The Author endeavours to remedy this in the present volume, and aims at giving in concise form a review of the present position of the colloid problem, which will, it is hoped, meet the requirements of students of chemistry, pharmacy, &c., who desire to obtain the most essential knowledge concerning colloids.

In addition, it will serve as a short manual for technologists, works managers, lecturers, and others who have not had opportunity of making acquaintance with this most recent development of science, which is undoubtedly of increasing importance.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and analysis, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure.

5. The fifth part of the document discusses the importance of data governance and the role of various stakeholders in ensuring that data is used ethically and in compliance with relevant regulations.

6. The sixth part of the document provides a summary of the key findings and recommendations. It emphasizes the need for a comprehensive data management strategy that integrates all aspects of data collection, analysis, and governance.

7. The seventh part of the document concludes with a call to action, urging the organization to implement the recommended measures and continuously monitor and improve its data management practices.

## CONTENTS.

	PAGE
I.—GENERAL CHARACTERISTICS. NOMENCLATURE, . . . . .	1
II.—PROPERTIES OF COLLOIDAL SOLUTIONS, . . . . .	6
Density. — Osmotic Pressure. — Diffusion. — The Brownian Movement.—Optical Properties.—Elec- trical and Magnetic Properties.—Cataphoresis.— Transformations—Properties of the Jellies.	
III.—THE RELATION OF COLLOIDAL SOLUTIONS TO SOLUTIONS PROPER AND TO SUSPENSIONS, . . . . .	20
IV.—THE DISPERSOIDS AND THEIR CLASSIFICATION, . . . . .	28
General Classification.—Suspension and Emulsion Colloids.	
V.—PREPARATION OF COLLOIDAL SOLUTIONS, . . . . .	32
Summary of Matter known in Colloidal and Crystal- loidal States.—Methods for the Preparation of Colloidal Solutions.	
VI.—RESEARCH METHODS. ULTRAMICROSCOPY, . . . . .	71
VII.—RECENT VIEWS ON THE NATURE OF THE COLLOID STATE, . . . . .	80
The Solution Theory.—The Adsorption Theory.— The Suspension Theory.—Crystalline Theory.	
VIII.—THE IMPORTANCE OF COLLOIDAL CHEMISTRY TO OTHER SCIENCES, . . . . .	97
Mineralogy.—Agriculture.—Medicine.	
IX.—THE IMPORTANCE OF COLLOIDAL CHEMISTRY IN CHEMICAL INDUSTRY AND TECHNOLOGY, . . . . .	102
X.—LITERATURE OF THE SUBJECT, . . . . .	106
INDEX, . . . . .	109





# CHEMISTRY OF THE COLLOIDS.

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## I. General Characteristics. Nomenclature.

DURING his researches into the nature of the diffusion of dissolved substances, Thomas Graham found that certain bodies, especially those which crystallise with ease from their solutions, rapidly diffuse from their solvents into pure water or pass through animal membranes, while, on the other hand, amorphous matters retain their union with the solvent to a certain degree of tenacity, and exhibit a marked deviation in their properties from the first-named substances. In order to differentiate between crystalloidal substances and those bodies diffusing with difficulty, and of which glue (*κόλλα*) may be regarded as typical, he proposed for the latter the term "colloidal substances." Graham may be rightly considered as the investigator who laid the foundations of colloidal chemistry by means of his two fundamental works, which,

appearing in 1861 and 1864, contained the first comprehensive notice of the colloids.

The dissimilarity between the two classes named afforded to Graham, not only a means for their separation, but also a method for the preparation of pure colloids. If a layer of water be placed carefully over another containing both colloidal and crystalloidal substances in solution, then after a short interval part of the crystalloids will diffuse into the aqueous stratum above, while the colloids remain behind. This diffusion may take place through a partition composed of gelatinous material, and the resulting separation was termed by Graham "Dialysis." Animal membranes, and also suitable parchment paper (vegetable parchment), are used as dialysing partitions. The vessel known as the dialyser is closed at the base by the membrane and immersed in pure water. The process of diffusion through membranes is termed Osmose. As an example of dialysis, the case of a water solution containing gelatine, common salt and sugar may be cited; the two latter substances diffuse through the membrane as crystalloids, the gelatine remains behind as a colloid.

In addition to glue, which has already been mentioned, the following are recognised colloids:—  
Starch, dextrine, varieties of gum, albumen, caramel,

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