

# MEMOIRS

OF THE

# CHEMICAL SOCIETY

OF

# LONDON

FOR

1841-1842 AND 1842-1843.

## VOL. I.

LONDON:

PRINTED BY RICHARD AND JOHN E. TAYLOR,

RED LION COURT, FLEET STREET.

1843.



## CONTENTS.

	Page
On the Preparation and Formation of Yellow Prussiate of Potash. By Professor Liebig .....	2
On the Formation of Mellon. By E. A. Parnell, Esq. ....	5
Note on the Preparation of Chlorate of Potash. By Thos. Graham, Esq., F.R.S. ....	5
On a Simple and Cheap Method of preparing Hydrochloric Acid absolutely pure, and of any required strength. By Wm. Gregory, M.D., F.R.S.E. ....	7
On the Mode of treating Copper Ores, and the Ores of other Metals combined with Sulphur, so as to ascertain the quantity of Sulphur in such Ores, and also the quantity of Copper in the native Sulphuret. By Wm. Maugham, Esq. ....	8
On a Specimen of Artificial Arragonite. By Col. P. Yorke .....	9
On the Atomic Weight of Carbon. By Dr. R. F. Marchand of Berlin...	11
On the Analysis of Atmospheric Air. By M. Dumas .....	13
Notice on the Artificial Magnetic Oxide of Iron. By Thomas Starkey Thomson, Esq. ....	14
On the Revision and more exact Determination of Atomic Weights. By Thos. Clark, M.D. ....	15
On a more simple and correct mode of Reducing the Indications of the ordinary Saccharometer and Hydrometer to each other. By Robert Warington, Esq.....	16
On the Preparation of Chromic Acid. By Robert Warington, Esq....	17
On the Agency of Caloric in permanently modifying the state of Aggregation of the Molecules of Bodies. By Warren De la Rue, Esq.	18
Notice of the Decomposition of Oxalic Methylic Æther (Oxalate of Oxide of Methyl) by Alcohol. By Henry Croft, Esq.....	19
Some Observations on Brewing. By Septimus Piesse, Esq.....	23
On the Specific Heat and Conducting Power of Building Materials. By John Hutchinson, Esq. ....	24
On the Analysis of the Chalk of the Brighton Cliffs. By Dr. Edw. G. Schweitzer .....	29
On the Action of Chromate of Potash on the Protosulphate of Manganese. By Robert Warington, Esq. ....	30
On the Equilibrium of the Temperature of Bodies in contact. By E. A. Parnell, Esq. ....	32

	Page
On the Preparation of Hippuric Acid. By Geo. Fownes, Ph.D. ....	33
On a curious Formation of Prussian Blue. By Robert Porrett, Esq.	35
Extract from a letter from Thos. Clark, M.D.....	35
An Examination of two specimens of South Sea Guano, imported for agricultural use. By George Fownes, Ph.D.....	36
On the Production of Artificial Uranite. By W. J. Cock, Esq. ....	38
On an Analysis of the "Artificial Uranite," made under the superin- tendence of E. A. Parnell, Esq.....	39
On the Analysis of Organic Substances containing Nitrogen. By George Fownes, Ph.D. ....	41
Extract from a letter from Dr. Will, dated Giessen, November 10, 1842	44
Remarks on the Determination of Nitrogen in Organic Analysis. By W. Francis, Esq.....	44
On the probable existence of Nitrogen combined with Silicon in Soils and other Substances. By W. H. Balmain, Esq. ....	45
Some Experimental Observations on the formation of Prussian Blue upon the surface of Gravel, through the medium of Ferrocyanide of Calcium. By Robert Warington, Esq.....	47
On the Manufacture of Sugar from the <i>Zea Mays</i> . By Henry Croft, Esq. ....	48
On Æthogen and the Æthonides. By William H. Balmain, Esq. ...	49
On the Exhalation of Carbonic Acid from the Human Body. By M. E. A. Scharling.....	50
On the Spontaneous Decomposition of the Chlorate of Ammonia. By Mr. Joseph Wonfor .....	54
Note on the Preparation of Æther. By George Fownes, Ph.D. ....	56

# PROCEEDINGS

OF THE

# CHEMICAL SOCIETY

OF

# LONDON

FOR

1841-1842 AND 1842-1843.

LONDON:

PRINTED BY RICHARD AND JOHN E. TAYLOR,

RED LION COURT, FLEET STREET.

1843.



## CONTENTS.

	Page
On some of the Products of the Action of Nitric Acid on Castor Oil. By Thomas George Tilley, Esq.....	1
On Bleaching Salts. By M. Detmer, Esq.....	6
On the Atomic Weight of Carbon. By Professors Redtenbacher of Prague, and Liebig of Giessen .....	9
On Malic Acid, and the Changes undergone by its Salts at High Tem- peratures. By Robert Hagen, Ph.D. ....	28
Table of the successive Strengths of Pyroxylic Spirit, corresponding to its successive Specific Gravities, with some Introductory Obser- vations. By Andrew Ure, M.D., &c. ....	36
On the Ferrocyanides. By R. Corbett Campbell, Esq. Communicated by Dr. Clark .....	38
Examination of Cetine, Ethal, Oils of Laurel Turpentine, Hyssop, and Assafoetida. By John Stenhouse, Ph.D.....	43
On the Radical of the Cacodyl Series of Compounds. By Professor Bunsen of Marburg .....	49
On the employment of Chromic Acid as an Agent in Voltaic Arrange- ments. By Robert Warington, Esq.....	61
On a new Class of Cacodyl Compounds containing Platinum. By Professor Bunsen of Marburg .....	63
On some of the Substances contained in the Lichens employed for the preparations of Archil and Cudbear. By Edward Schunck, Esq., Manchester .....	71
On a Re-arrangement of the Molecules of a Body after Solidification. By Robert Warington, Esq. ....	77
On the Conversion of Benzoic Acid into Hippuric Acid in the Animal Economy. By Alfred Baring Garrod, Esq., of University College .	79
On the Constitution of the Sulphates as illustrated by late Thermo- metrical Researches. By Thomas Graham, Esq., F.R.S. &c. ....	82
On the Change of Colour in the Biniodide of Mercury. By Robert Warington, Esq.....	85
On a new Oxalate of Chromium and Potash. By Henry Croft, Esq. 89	89
Some additional Observations on the Red Oxalate of Chromium and Potash. By Robert Warington, Esq. ....	93
On the Preparation of Cyanide of Potassium, and on its Applications. By Prof. Liebig of Giessen. ....	94
On the Preparation of Artificial Yeast. By George Fownes, Ph.D....	100
On some Salts of Cadmium. By Henry Croft, Esq.....	104
Experiments on the Heat disengaged in Combinations. By Thomas Graham, Esq., F.R.S. &c. ....	106

	Page
On Pyrogallic Acid, and some Astringent Substances which yield it. By John Stenhouse, Ph.D. ....	127
On some Astringent Substances as Sources of Pyrogallic Acid. By John Stenhouse, Ph.D. ( <i>continued</i> ). ....	132
On some new cases of Voltaic Action, and on the Construction of a Battery without the use of Oxidizable Metals. By Alexander R. Arrott, Esq. ....	142
On Æthogen and Æthonides. By William H. Balmain, Esq. ....	149
Report of some Experiments with Saline Manures containing Nitrogen, conducted on the Manor Farm, Havering-atte-Bower, Essex, in the occupation of Collinson Hall, Esq. By W. M. F. Chatterley, Esq. ....	152
On the Sugar of the Eucalyptus. By James F. W. Johnston, Esq., M.A., F.R.S. ....	159
On Palladium—its Extraction, Alloys, &c. By William John Cock, Esq. ....	161
On the Formation of Fat in the Animal Body. By Justus Liebig, Ph.D., M.D., F.R.S. &c. ....	164
On the Changes in Composition of the Milk of a Cow, according to its Exercise and Food. By Lyon Playfair, Ph.D. ....	174
On a new Method of obtaining pure Silver, either in the Metallic State or in the form of Oxide. By William Gregory, M.D., F.R.S.E. &c. ....	190
The Leaf-stalks of Garden Rhubarb as a Source of Malic Acid. By Thomas Everitt, Esq. ....	193
Observations on M. Reiset's Remarks on the New Method for the Estimation of Nitrogen in Organic Compounds, and also on the supposed part which the Nitrogen of the Atmosphere plays in the formation of Ammonia. By H. Will, Ph.D. ....	197
Examination of Astringent Substances. By John Stenhouse, Ph.D. ( <i>continued</i> ) ....	208
On Theine and its Preparation. By John Stenhouse, Ph.D. ....	215
On the Constitution of the Subsals of Copper.—No. I. On the Subsulphates. By J. Denham Smith, Esq. ....	221
On the Spontaneous Change of Fats. By W. Beetz, Esq. ....	230
On certain Improvements in the Instrument, invented by the late Dr. Wollaston, for ascertaining the Refracting Indices of Bodies. By John Thomas Cooper, Esq. ....	234
On Theine. By John Stenhouse, Ph.D. ....	237
On the Composition of an Acid Oxide of Iron ( <i>Ferric Acid</i> ). By J. Denham Smith, Esq. ....	240
On the Action of Alkalies on Wax. By Robert Warington and William Francis, Esqrs. ....	248
On the Action of Oil of Vitriol upon Ferrocyanide of Potassium. By George Fownes, Ph.D. ....	251