

of the negative ions.—Antimony and sulphide of antimony: MM. **Chrétion** and **Guinchant**.—The action of the amino-ethers and imino-chlorides on organo-magnesium derivatives: R. **Marquis**. An attempt at a new general method for the synthesis of ketones, starting with the imino-ether R.C(OR):(NR). The yield in the case of benzophenone is good, but the method is not general. In some cases the imino-chloride gives better results.—The preparation of glycidic ethers and of aldehydes in the hexahydroaromatic series: Georges **Darzens** and P. **Lefébure**. The glycidic esters were obtained by the interaction of chloroacetic ester with cyclohexanone in the presence of sodium ethylate. The aldehyde is prepared from the glycidic ester by heating in a vacuum. The reaction has been applied successfully to homologues of cyclohexanone.—The structure and probable origin of the magnetic iron ore of Diélette, Manche: L. **Cayeux**. Conclusions as to the mode of formation of the ore are drawn from a micrographic study.—The gasteropods collected by the Charcot Antarctic Expedition: A. **Vayssière**.—The structure of the sporal wall of the Myxosporidia: L. **Léger** and E. **Hesse**.—A genus of lamellibranchs with multiple mouths: Paul **Pelseuer**. The genus *Lima* is characterised in its normal condition by having two symmetrical buccal orifices, each of which leads directly into the oesophagus.—X-rays and genital activity: F. **Villemin**.—The disease of wine (Graisse): E. **Kayser** and E. **Manceau**.—The toxin and antitoxin of cholera: MM. **Brau** and **Denier**. The serum of animals which have received the toxin under the skin possesses very slight antitoxic power. The antitoxic power of the serum becomes much more marked when the toxin has been injected into the veins.—The laws of muscular elasticity and their application to energetics: Charles **Henry**.—Some new palæontological data on the Devonian of western Ahenet, Central Sahara (expedition of MM. R. Chudeau and E. F. Gautier): Emile **Haug**.—The fauna of the Lower Coal-measures of Baudour (Hainaut): J. **Cornet**.—The flora of the same: Armand **Renier**.—Chalk and clay on the sea floor: J. **Thoulet**.

## DIARY OF SOCIETIES.

### THURSDAY, MARCH 29.

ROYAL SOCIETY, at 4.30.—On the Dilatational Stability of the Earth: Lord Rayleigh, O.M., P.R.S.—On the Observations of Stars made in some British Stone Circles. Second Note: Sir J. Norman Lockyer, K.C.B., F.R.S.—The Calculation of Ellipsoidal Harmonics: Sir William D. Niven, K.C.B., F.R.S.

ROYAL INSTITUTION, at 5.—Internal Combustion Engines: Prof. B. Hopkinson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—*Adjourned Discussion*: Electrical Equipment of the Aberdare Collieries of the Powell Duffryn Company: C. P. Sparks.—Electric Winding, considered Practically and Commercially: W. C. Mountain.

### FRIDAY, MARCH 30.

ROYAL INSTITUTION, at 9.—Recent Progress in Magneto-optics: Prof. P. Zeeman.

### SATURDAY, MARCH 31.

ROYAL INSTITUTION, at 3.—The Corpuscular Theory of Matter: Prof. J. J. Thomson, F.R.S.

### MONDAY, APRIL 2.

SOCIETY OF ARTS at 8.—Fire, Fire Risks, and Fire Extinction: Prof. Vivian B. Lewes.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Ropiness in Flour and Bread, and its detection and Prevention: E. J. Watkins.—The Röse-Herzfeld and Sulphuric Acid Methods for the Determination of the Higher Alcohols.—A Criticism: V. H. Veley, F.R.S.

### TUESDAY, APRIL 3.

ROYAL INSTITUTION, at 5.—The Influence of Geology on Scenery: Dr. J. E. Marr, F.R.S.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Harbours of South Africa: C. W. Methven.—*Probable Paper*: On the Resistance of Iron and Steel to Reversals of Direct Stress: Dr. T. E. Stanton and L. Bairstow.

### WEDNESDAY, APRIL 4.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Variations in Direction of the Wind, and an Instrument for determining them Graphically: B. F. Beverley.

GEOLOGICAL SOCIETY, at 8.—On a Case of Unconformity and Thrust in the Coal-measures of Northumberland: Prof. G. A. L. Lebour and Dr. J. A. Smythe.—The Carboniferous Succession below the Coal-measures in North Shropshire, Denbighshire, and Flintshire: Dr. Wheelton Hind and J. T. Stobbs.

ENTOMOLOGICAL SOCIETY, at 8.

SOCIETY OF PUBLIC ANALYSTS, at 8.

SOCIETY OF ARTS, at 8.—Rameite and its Possibilities: Mrs. Ernest Hart.

NO. 1900, VOL. 73]

## THURSDAY, APRIL 5.

ROYAL SOCIETY, at 4.30.—*Probable Paper*: On the Physiological Action of a Recently Discovered African Arrow Poison: Dr. Charles Bolton.

CHEMICAL SOCIETY, at 8.30.—An Improved Apparatus for measuring Magnetic Rotations and obtaining a Powerful Sodium Light: W. H. Perkin, Sen.—The Rusting of Iron: G. T. Moody.—On the Determination of Carbon in Soils: A. D. Hall, N. H. J. Miller and N. Harmer.—The Electrolysis of the Salts of  $\beta\beta$ -Dimethylglutaric Acid: J. Walker and J. K. Wood.—Bromo- and Hydroxy-Derivatives of  $\beta\beta\beta$ -Tetramethylsuccinic Acid: J. K. Wood.—Some new Orthoxylene Derivatives: G. Stallard.—A new Solvent for Gold. Preliminary Note: J. Moir.—The Molecular Condition in Solution of Ferrous Oxalate: a Correction: S. E. Sheppard and C. E. K. Mees.

ROYAL INSTITUTION, at 5.—Internal Combustion Engines: Prof. B. Hopkinson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Electrical Equipment of the Aberdare Collieries of the Powell Duffryn Company: C. P. Sparks.—Electric Winding considered Practically and Commercially: W. C. Mountain (*Conclusion of Discussion*).

LINNEAN SOCIETY, at 8.—*Exhibition*: Some Plants new to the Pre-Glacial Flora of Great Britain: Clement Reid, F.R.S.—*Papers*: A Second Contribution to the Flora of Africa.—Rubiaceae and Compositae, Part II.: Spencer Moore.—The Anatomy of the Stem and Leaf of *Nyctisia horribunda*, R.Br.: E. J. Schwartz.—Taiwanites, a new Genus of *Confertæ* from the Island of Formosa: B. Hayata.

CIVIL AND MECHANICAL ENGINEERS' SOCIETY, at 8.—Steam Turbines: G. D'A. Meynell.

## FRIDAY, APRIL 6.

MALACOLOGICAL SOCIETY, at 8.—On a Species of the Land Molluscan Genus *Dyakia* from Siam: Lt.-Col. H. H. Godwin-Austen, F.R.S.—Descriptions of new Species of Land Shells from Peru and Colombia: S. I. Da Costa.—Note on Swainson's Genus *Volutilithes*: R. Bullen Newton.—Further Notes on the Genus *Chloritis*, with Description of new Species: G. K. Gude.—*Vertigo parcedentata*, Braun, in Holocene Deposits in Great Britain: A. S. Kennard and B. B. Woodward.

ROYAL INSTITUTION, at 9.—The Physical Basis of Life: W. B. Hardy, F.R.S.

## SATURDAY, APRIL 7.

ROYAL INSTITUTION, at 3.—The Corpuscular Theory of Matter: Prof. J. J. Thomson, F.R.S.

THE ESSEX FIELD CLUB (at Essex Museum of Natural History, Stratford), at 6.30.—Salt-making in Essex, Ancient and Modern: Miller Christy.—Neolithic Man in Epping Forest: F. W. and H. Campion.

## CONTENTS.

	PAGE
Stars and Nebulae. By Prof. R. A. Gregory . . . . .	505
British Ascidiæ. By Dr. W. Garstang . . . . .	508
The Metallurgy of Iron and Steel. By A. McWilliam . . . . .	509
Our Book Shelf:—	
Lambert: "Glue, Gelatine, and their Allied Products,—C. S. . . . ."	510
"Webbia-Raccolta di Scritti Botanici pubblicati in occasione del 50° anniversario della Morti di Filippo Barker Webb" . . . . .	510
Goursat: "A Course in Mathematical Analysis" . . . . .	511
Letters to the Editor:—	
Agriculture and the Empire.—M. J. R. Dunstan . . . . .	511
Sea-sickness and Equilibration of the Eyes.—Alfred Sang . . . . .	511
Production of an Electrically Conductive Glass.—Charles E. S. Phillips . . . . .	512
Interpretation of Meteorological Records.—R. T. Omond . . . . .	512
Oscillation of Flame Cones.—Harold E. Temple; Prof. A. Smithells, F.R.S. . . . .	512
Gas for Heating and Lighting Laboratories.—Alex. Pardy; Prof. Vivian B. Lewes . . . . .	513
Cooperation between Scientific Libraries.—Dr. Hugh Marshall . . . . .	513
The Problems of Geology. ( <i>Illustrated</i> ) . . . . .	513
The National Physical Laboratory . . . . .	514
Notes . . . . .	515
Our Astronomical Column:—	
Comet 1906c . . . . .	518
Observation of Comet 1905c after Perihelion . . . . .	518
New Variable Stars in the Region about $\gamma$ Sagittæ . . . . .	518
The Supposed Nebulosity around Nova Aquilæ No. 2 . . . . .	518
Some Tests of the Snow Telescope . . . . .	518
Studies on the Synthesis of Peptides and Proteids. By J. B. C. . . . .	519
The Protection of Birds . . . . .	521
The Place of Polytechnics in Education. By Sir Norman Lockyer, K.C.B., F.R.S. . . . .	521
University and Educational Intelligence . . . . .	524
Societies and Academies . . . . .	525
Diary of Societies . . . . .	528