

PAPERS PUBLISHED DURING THE YEAR.

1. On the Progress of Physics during the XIXth Century—Presidential Address to Section VI of the Royal Society of Canada. John Cox.
2. A Radioactive Substance emitted from Thorium compounds, by E. Rutherford, *Phil. Mag.*, Jan., 1900.
3. Radioactivity produced in substances by the action of Thorium compounds, E. Rutherford, *Phil. Mag.*, Feb., 1900.
4. Energy of Rontgen Rays and Becquerel radiation and the energy required to produce an ion, E. Rutherford and R. K. McClung, *Proc. Royal Society*, June 21, 1900.
5. On the Capacity for heat of water between freezing and boiling points with the determination of the mechanical equivalent of heat in terms of the international electrical units, Dr. H. T. Barnes, *Proc. Royal Society*, June 21, 1900.
6. Relation of the electrical and thermal units, Dr. H. T. Barnes, *Trans. Royal Society of Canada*.
7. On the Clark cell as a transition cell of the fourth type, Dr. H. T. Barnes, *Jour. Phys. Chem.*, Jan., 1900.
8. On a hermetically sealed type of Clark Standard Cell, Dr. H. T. Barnes, *Phys. Rev.*, May, 1900.
9. On the Western Cell as a transition cell and a standard of electromotive force with a determination of the ratios to the Clark cell, Dr. H. T. Barnes, *Journal Phys. Chem.*, May, 1900.
10. Reply to Dr. E. Cohen on the theory of the transition cell, Dr. H. T. Barnes, *Journ. Phys. Chem.*, April, 1900.
11. On the discontinuity in the density curves of certain hydrated salts, Dr. H. T. Barnes, *Trans. Royal Society of Canada*.
12. On the influence and solubility of mercurous sulphate in the Clark and Western cells, Dr. E. Cohen and Dr. H. T. Barnes, *Loreng's Monatschrift*.

PAPERS IN COURSE OF PUBLICATION.

13. Distribution of Alternating Currents in cylindrical conductors, Prof. Rutherford and J. W. Fraser.
14. Damping of electrical oscillations, Miss Brooks.
15. Transitive temperature of zinc sulphate by a new electrical method, Dr. H. T. Barnes.

INVESTIGATIONS NOW IN PROGRESS.

16. On the absolute determination of the E M F of a Clark cell, R. O. King.
17. A new electrical method for determining thermal conductivity of metals, R. O. King and R. G. Duncan.
18. Variations of specific heat of mercury with temperature, Dr. H. T. Barnes.
19. Density of ice, Dr. H. T. Barnes.
20. Variations of the rate of recombination of gaseous ions with the pressure, R. K. McClung.
21. Relation between conductivity and pressure in a gas exposed to Rontgen rays, Prof. E. Rutherford.