

List of Professor B. Arakatsu's Papers on Scientific Subjects.

1. On the limiting size of colloidal particles in a Brownian motion : Results for gold and copper particles. (with M. Fukuda) Mem. Coll. Sci., Kyoto Imp. Univ., A, 4 (1920), 179.
2. On the negatively charged particles in the positive ray tube. (with M. Ishino) Mem. Coll. Sci., Kyoto Imp. Univ., A, 4 (1921), 355.
3. The theory of general relativity in a physically flat space. Mem. Coll. Sci., Kyoto Imp. Univ., A, 8 (1925), 263.
4. Self reversal lines of lead in explosion spectrum and the series relations in them. Mem. Coll. Sci., Kyoto Imp. Univ., A, 9 (1926), 451.
5. Self-reversal of lines in the explosion spectrum of tin. Mem. Coll. Sci., Kyoto Imp. Univ., A, 10 (1926), 31.
6. The reversal of lines in the explosion spectrum of lead. Mem. Coll. Sci., Kyoto Imp. Univ., A, 10 (1927), 171.
7. Röntgenographische Bestimmung der frei Elektronen in Lithiummetall. (with P. Scherrer) Helv. Phys. Acta, 2 (1929), 153.
8. Bestimmung der Elektrizitätsverteilung in Lithium-Atom. (with P. Scherrer) Helv. Phys. Acta, 3 (1930), 428.
9. On the scattering power of X-rays of various materials. (*in Japanese*) *Öyō-Butsuri*, 1 (1932), 150, 172, 240.
10. The continuous spectrum of hydrogen associated with each of the lines in the Balmer series. (with Y. Ōta and K. Kimura) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., 5 (1932), 1.
11. On some peculiar phenomena of the electrodeless ring discharge through hydrogen in a long tube. (with K. Kimura) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., 5 (1932), 15.
12. The principle of the conservation of angular momentum or the principle of the conservation of the symmetry or antisymmetry of the total wave function (Bose or Fermi statistics) in molecules? (with Y. Ōta) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ. 5 (1932), 25.
13. The activation of air by the electrodeless ring discharge. (with K. Kimura) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., 5 (1932), 143.

14. The electrodeless ring discharge through potassium vapour. (with Y. Uemura) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., **5** (1932), 159.
15. On the anomalous absorption of gamma-rays. (The possibility of the quantum jump of the rest-mass of an electron) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., **5** (1932), 163.
16. Notes on spin angular momentum in the process of the artificial disintegration of lithium atoms. Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., **10** (1934), 81.
17. The construction of a small high voltage source suitable for the production of high speed ions. (with K. Kimura and Y. Uemura) (*in Japanese*) *Ōyō-Butsuri*, **4** (1935), 222.
18. Artificial transmutation of deuteron. (with K. Kimura and Y. Uemura) (*in Japanese*) *Kagaku*, **5** (1935), 144.
19. Experimental transmutation of certain light elements bombarded by ions of hydrogen and heavy hydrogen. I. (with K. Kimura and Y. Uemura) Mem. Fac. Sci. & Agr., Taihoku Imp. Univ., **18** (1936), 75.
20. Expulsion of neutrons from lead by cosmic rays. (with K. Kimura and Y. Uemura) *Nature*, **140** (1937), 277.
21. Photo-fission of uranium and thorium produced by the gamma-rays of lithium and fluorine bombarded with high speed protons. (with Y. Uemura, M. Sonoda, S. Shimizu, K. Kimura and K. Muraoka) *Proc. Phys.-Math. Soc., Japan*, **23** (1941), 440.
22. The range of the photo-fission-fragments of uranium produced by the gamma-rays of lithium bombarded with protons. (with M. Sonoda, Y. Uemura and S. Shimizu) *Proc. Phys.-Math. Soc., Japan*, **23** (1941), 633.
23. A type of nuclear photo-disintegration: The expulsion of alpha-particles from various substances irradiated by the gamma-rays of lithium and fluorine bombarded with high speed protons. (with M. Sonoda, Y. Uemura, S. Shimizu and K. Kimura) *Proc. Phys.-Math. Soc., Japan*, **25** (1943), 173.
24. Measurement of capture cross section of uranium nuclei for thermal neutron. (with T. Hanatani and K. Kimura) (*in Japanese*) Unpublished (June, 1945).

25. Fission cross section and absorption cross section of uranium nuclei for thermal neutron. (with T. Hanatani) (*in Japanese*) Unpublished (June, 1945).
26. Cloud chamber observation of photo-alpha particles produced by 17 Mev gamma-rays. (with S. Shimizu, T. Hanatani and J. Muto) Journ. Phys. Soc., Japan, **1** (1946), 24.
27. On the magnetic suspension mechanism for research of high speed rotation. (with A. Katase, J. Kokame and S. Yano) (*in Japanese*) Rep. Inst. Chem. Res., Kyoto Univ., **17** (1949), 87.
28. High speed rotation with the rotor suspended by "magnetic bearing" (with A. Katase, J. Kokame and S. Yano) (*in Japanese*) *Öyō-Butsuri*, **18** (1949), 35.
29. Study on high speed rotation, II. (with A. Katase, J. Kokame and S. Yano) (*in Japanese*) Rep. Inst. Chem. Res., Kyoto Univ., **18** (1949), 92.
30. Studies on clay. I. (with T. Shidei) (*in Japanese*) Rep. Inst. Chem. Res., Kyoto Univ., **19** (1949), 28.
31. Study on high speed rotation, III. (with A. Katase, J. Kokame and S. Yano) (*in Japanese*) Rep. Inst. Chem. Res., Kyoto Univ. **19** (1949), 31.
32. Study on high speed rotation, IV. (with A. Katase, J. Kokame and S. Yano) (*in Japanese*) Bull. Inst. Chem. Res., Kyoto Univ., **21** (1950), 60.
33. On the photo-disintegration of beryllium by the high energy rays. (with M. Sonoda, Y. Uemura, S. Yasumi and Y. Saji) Mem. Coll. Sci., Univ. of Kyoto, A **26** (1950), 97.
34. Study on high speed rotation, V. (with A. Katase, J. Kokame and Y. Saji) Bull. Inst. Chem. Res., Kyoto Univ., **22** (1950), 67.
35. Photo-disintegration of beryllium by the high energy gamma-rays. (with M. Sonoda, Y. Uemura, S. Yasumi and Y. Saji) Bull. Inst. Chem. Res., Kyoto Univ., **22** (1950), 71.
36. Study on the ion source. (with Y. Uemura, S. Yasumi, M. Sakisaka and S. Miyashiro) Bull. Inst. Chem. Res., Kyoto Univ., **23** (1950), (in press).