

10.
John Müller.

By his work on organic chemistry, by his many controversies, such as that on fermentation, by his popular letters on chemistry, and especially by his great influence as a teacher, Liebig himself did much to bring about an alliance of the separate sciences and a connection between practical pursuits and abstract research, and to draw attention to the interdependence of the various forces of nature. Only second in influence was Johannes Müller of Berlin. Among the many expressions which took their origin in the circle of studies suggested by these influences, we may select three as giving increasingly clear emphasis to the point now under consideration—viz., the correlation of all the physical forces of nature. These expressions are those of the convertibility of forces, of the existence of a common measure of force, and of the conservation implying the perdurability of a certain quantity—now termed Energy—of which all phenomena are merely a partial exhibition. They are connected with the names of Karl Friedrich Mohr, Julius Robert Mayer, and Hermann Helmholtz.

Were it my object merely to write the history of science, I should probably follow the example of some historians¹ and omit altogether the first of these names in the present connection. But as my object is to write the history of scientific thought, I feel bound to give a

¹ Mach, in his recent very lucid and valuable work, 'Die Principien der Wärmelehre,' Leipzig, 1896, does not mention Mohr. On the other side, Helm ('Die Energetik,' 1898, p. 9) mentions Mohr and likewise Planck ('Das Princip der Erhaltung der Energie,' 1887,

p. 21). Tait's first edition of 'Recent Advances,' 1874, does not contain Mohr's name. The third edition gives a full account of Mohr's early papers (pp. 51 and 60, &c.) See also the appreciative article on K. F. Mohr in the 'Ency. Brit.'