



James Prescott Joule

1818-1889

The man to whom we are indebted for the familiar expression $i^2 R$ for the power dissipated in a resistor is the English physicist James Prescott Joule, who published the result as Joule's law in 1841. He also shared in the famous discovery of the conservation of energy.

Joule was born in Salford, England, the second of five children of a wealthy brewer. He taught himself electricity and magnetism at home as a young boy and obtained his formal education at nearby Manchester University. His experiments on heat were conducted in his home laboratory, and to maintain the accuracy of his measurements he was forced to develop his own system of units. His chief claim to fame is that he did more than any other person to establish the idea that heat is a form of energy. Throughout most of his life Joule was an isolated amateur scientist, but toward the end of his years his work was recognized by honorary doctorates from Dublin and Oxford. In his honor the unit of energy was named the *joule*.

(Source: D. Johnson, J. Johnson and J. Hilborn, *Electric Circuit Analysis*, Prentice-Hall, 1989)