

quartz, nearly impenetrable by light, allows a large portion of the heat to pass. By passing the rays through various media, the heat may be, as it were, *sifted* from the light which accompanies it.

[2nd Ed.] [The diathermancy of bodies is distinct from their diaphaneity, in so far that the same bodies do not exercise the same powers of selection and suppression of certain rays on heat and on light; but it appears to be proved by the investigations of modern thermotical philosophers (MM. De la Roche, Powell, Melloni, and Forbes), that there is a close analogy between the absorption of certain colors by transparent bodies, and the absorption of certain kinds of heat by diathermanous bodies. Dark sources of heat emit rays which are analogous to blue and violet rays of light; and highly luminous sources emit rays which are analogous to red rays. And by measuring the angle of total reflection for heat of different kinds, it has been shown that the former kind of calorific rays are really less refrangible than the latter.<sup>30</sup>

M. Melloni has assumed this analogy as so completely established, that he has proposed for this part of thermotics the name *Thermochroology* (Qu. *Chromothermotics?*); and along with this term, many others derived from the Greek, and founded on the same analogy. If it should appear, in the work which he proposes to publish on this subject, that the doctrines which he has to state cannot easily be made intelligible without the use of the terms he suggests, his nomenclature will obtain currency; but so large a mass of etymological innovations is in general to be avoided in scientific works.

M. Melloni's discovery of the extraordinary power of *rock-salt* to transmit heat, and Professor Forbes's discovery of the extraordinary power of *mica* to polarize and depolarize heat, have supplied thermotical inquirers with two new and most valuable instruments.<sup>31</sup>]

Moreover, besides the laws of conduction and radiation, many other laws of the phenomena of heat have been discovered by philosophers; and these must be taken into account in judging any theory of heat. To these other laws we must now turn our attention.

<sup>30</sup> See Prof. Forbes's *Third Series of Researches on Heat*, *Edinb. R.S. Trans.* vol. xiv.

<sup>31</sup> For an account of many thermotical researches, which I have been obliged to pass unnoticed here, see two Reports by Prof. Powell on the present state of our knowledge respecting Radiant Heat, in the *Reports of the British Association* for 1832 and 1840.