

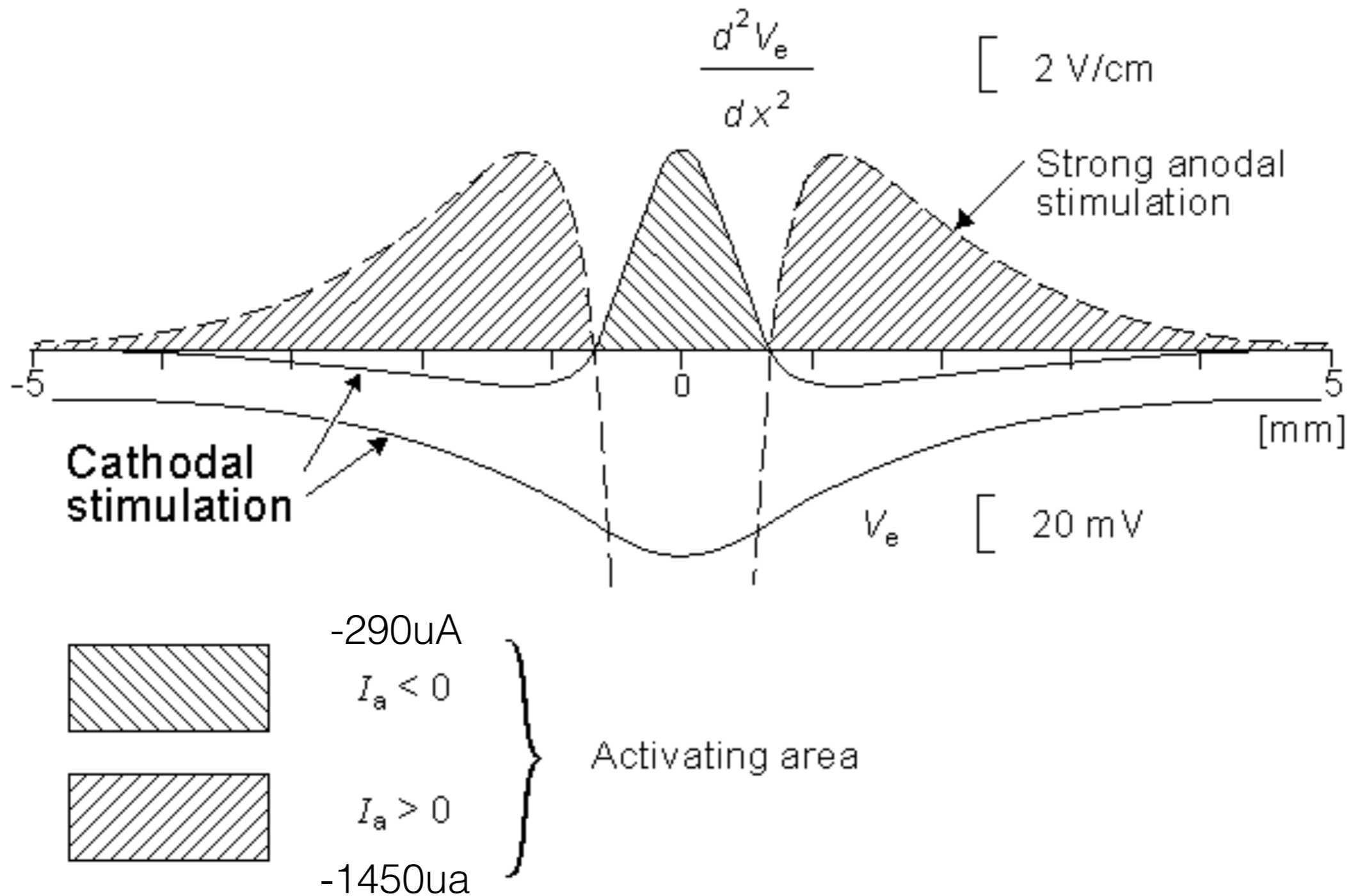
FES

Materiale grafico di supporto alla lezione

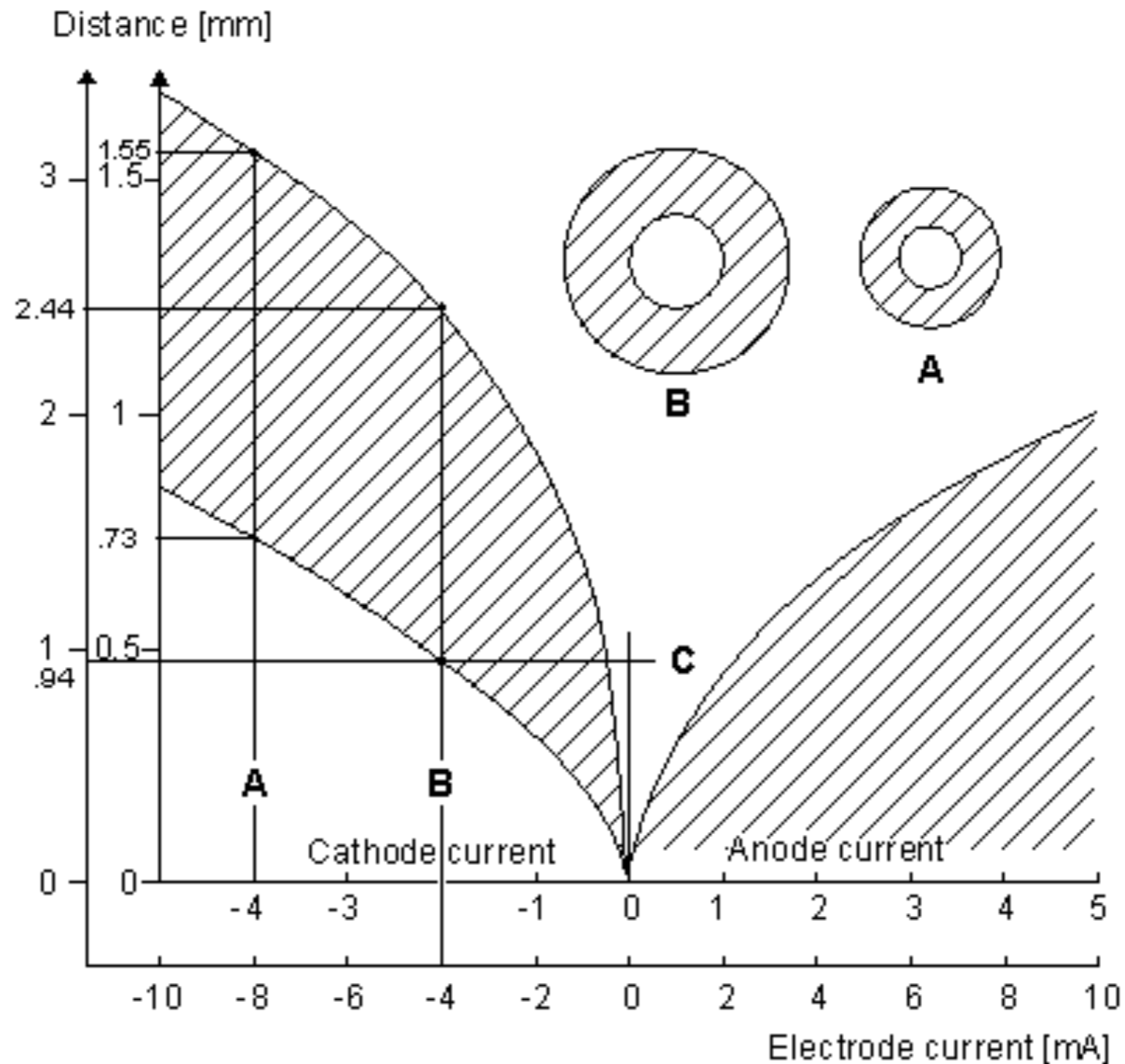
Estratto da:

“Bioelectromagnetism” cap. 21

funzione di attivazione



Relazioni corrente/distanza (elettrodo unipolare)



Risposta sottosoglia fibra mielinata (nodi 1-4)

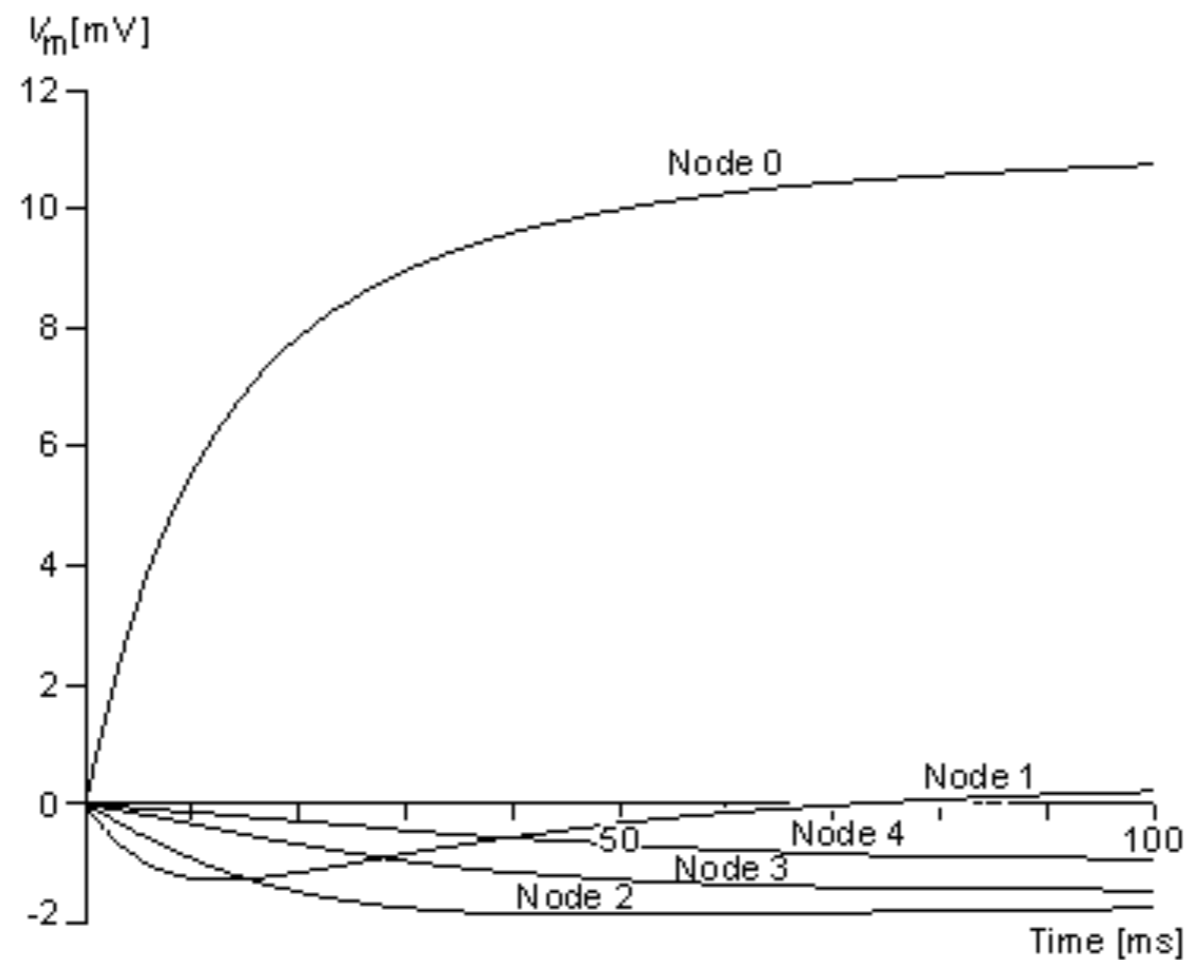


Figure 21.3 Response at central node ($n = 0$) and adjoining four nodes to a point current source located 1 mm from the fiber and excited with a current step of 0.1 mA. The geometry is described in Figure 21.1. The fiber diameter is 20 μm , and the internodal spacing is 2 mm. Other parameters are given in Table 21.1.

curve intensità/durata

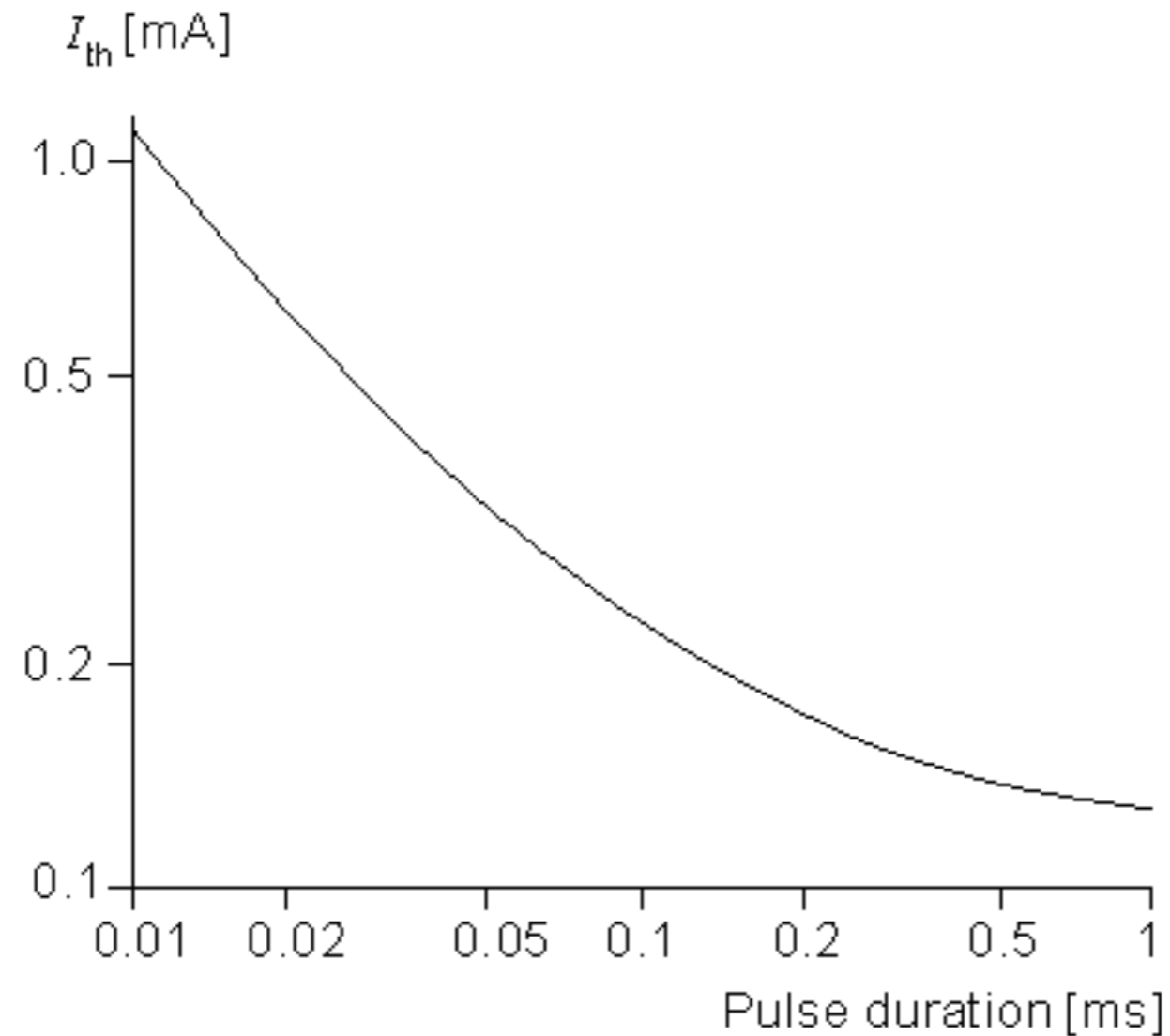


Figure 21.4 Log-log plot of a strength duration that just produces activation of 20 μm diameter myelinated fiber from a point source of current 1 mm distant. The geometry is described in Figure 21.1, and the fiber electrical properties are tabulated in Table 21.1. (From McNeal, 1976.)

relazione diametro corrente di soglia

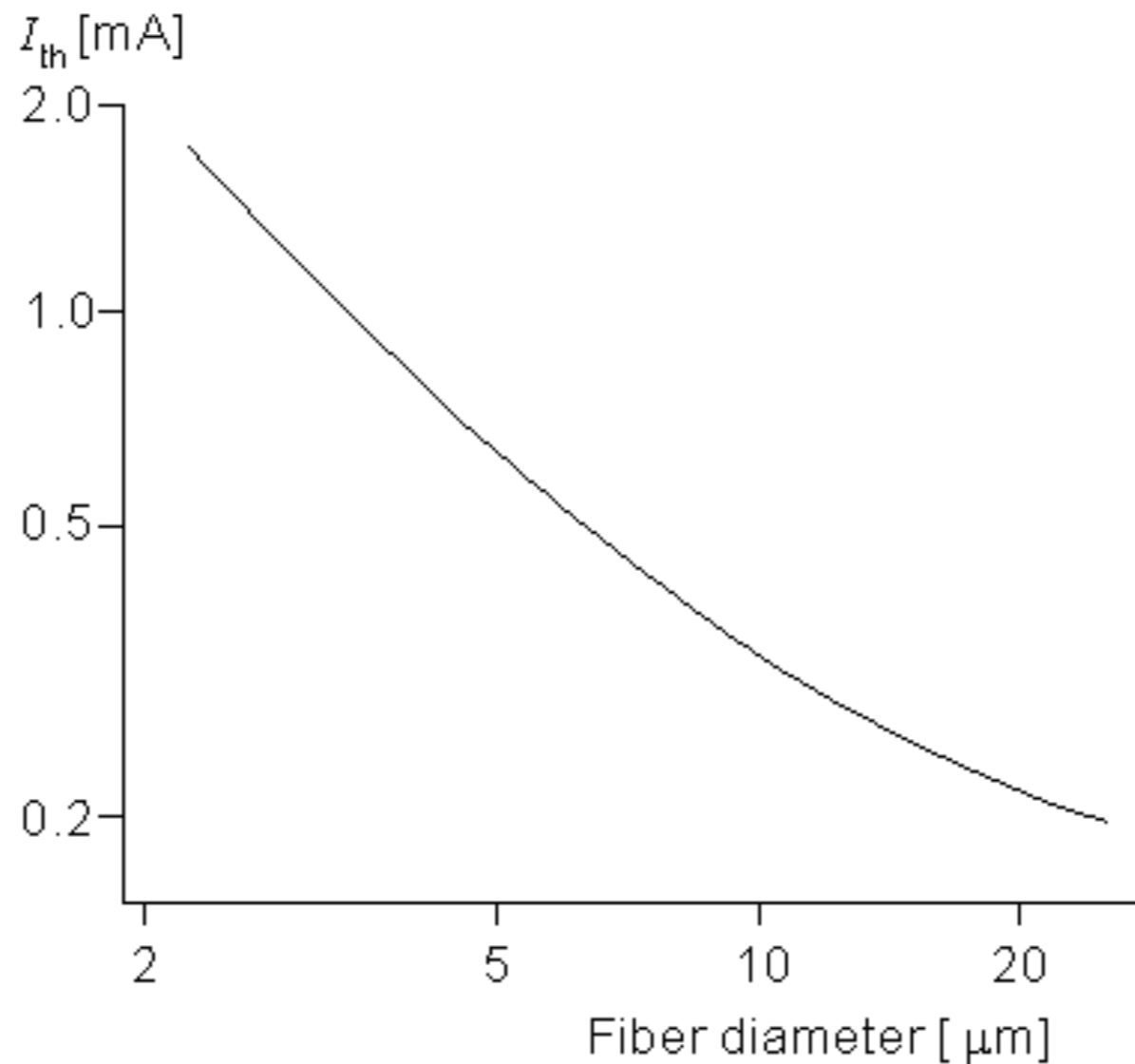


Figure 21.5 Log-log plot of the relationship between threshold current and myelinated fiber diameter for a point current source 1 mm from the fiber. The geometry is described in Figure 21.1, and the fiber electrical properties are given in Table 21.1. (From McNeal, 1976.)

reclutamento muscolare

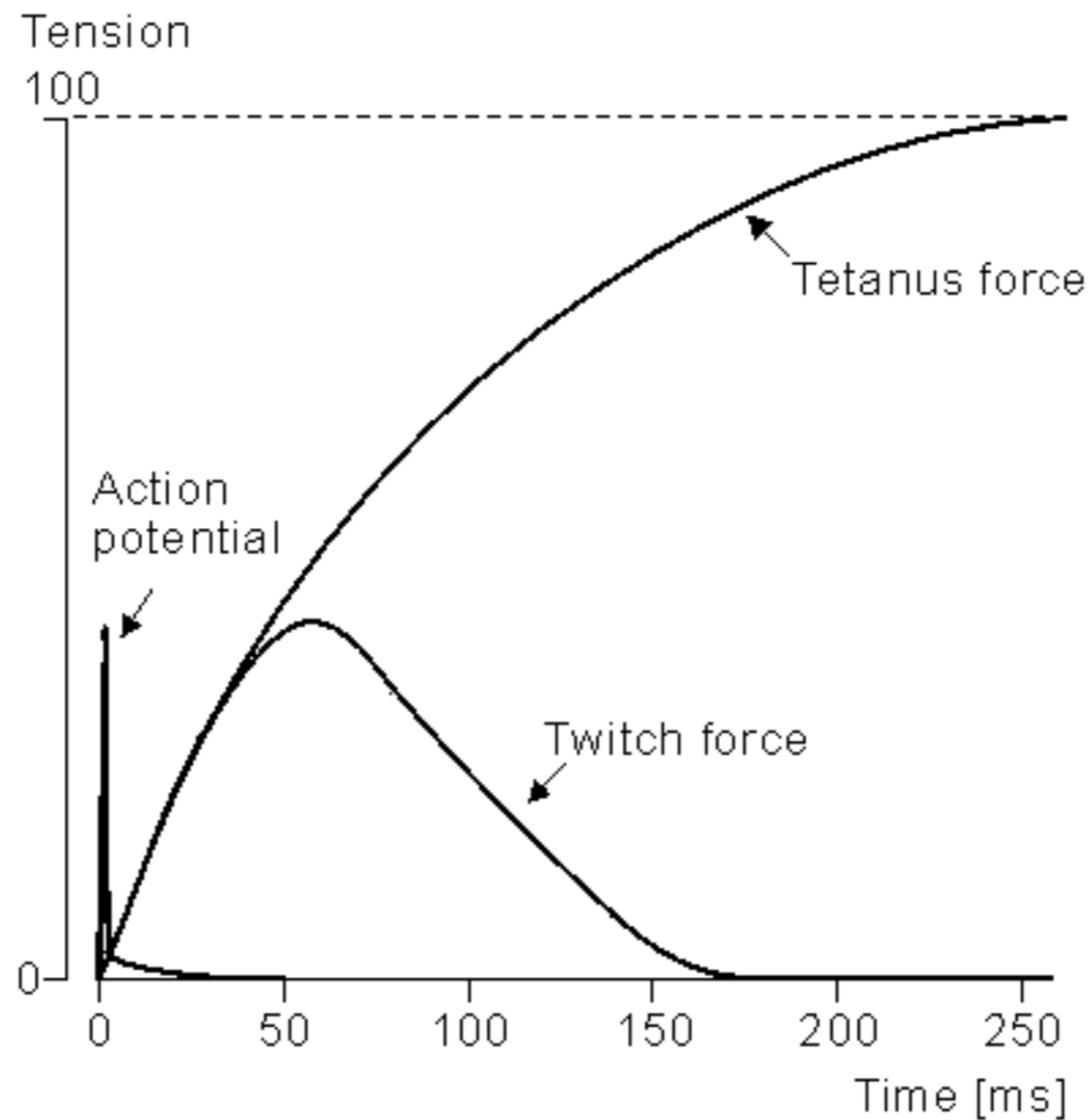


Figure 21.8 The twitch response (tension vs. time) for a single muscle fiber. The stimulus is described by the initial impulse.

Intensità durata nervo vs. muscolo

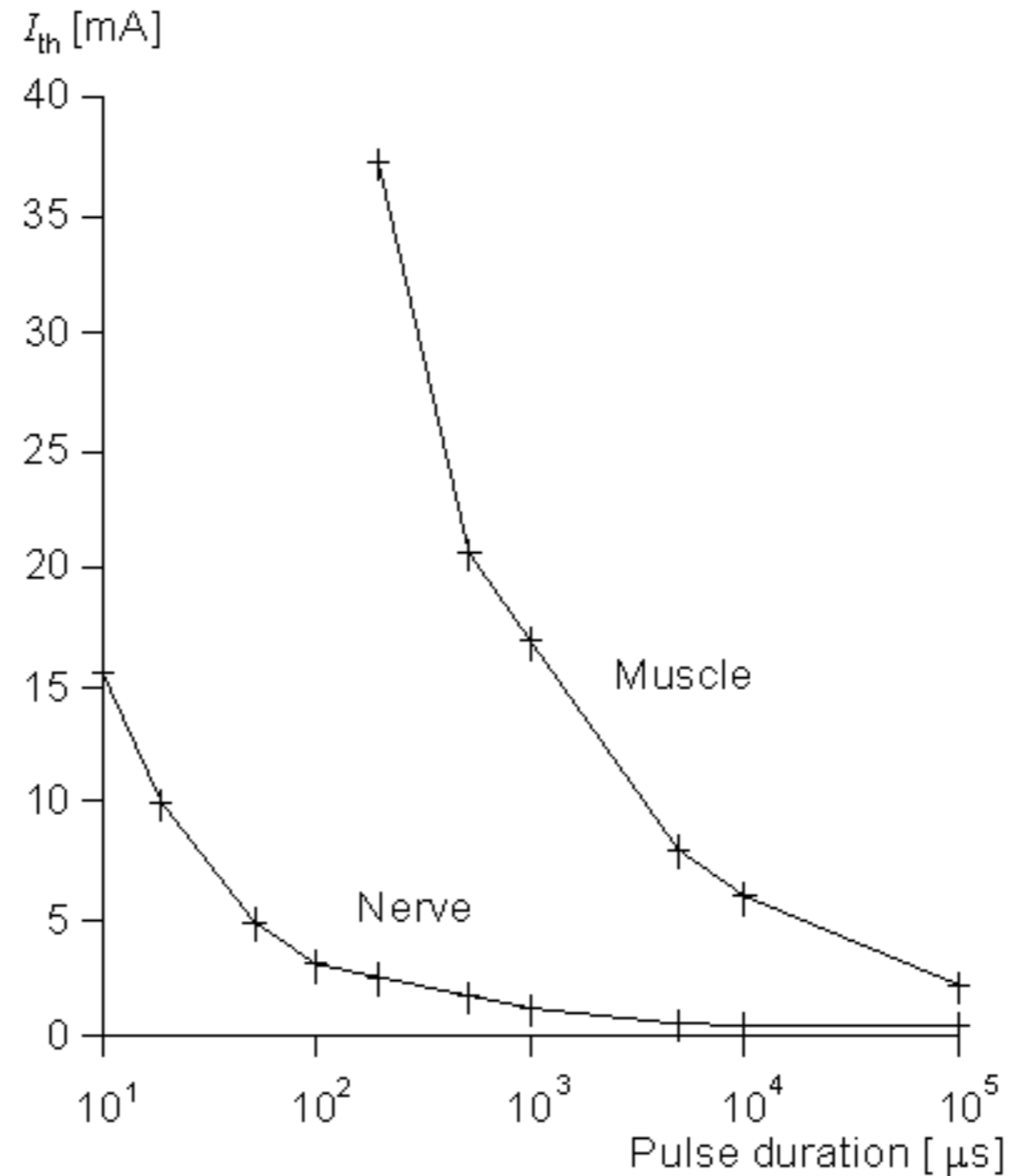


Figure 21.9 Experimentally determined strength-duration relationship for motor nerve stimulation and for direct stimulation of the muscle. In each case the muscle response was held at the same constant value (a relatively low level of force). (From Mortimer, 1981.)