

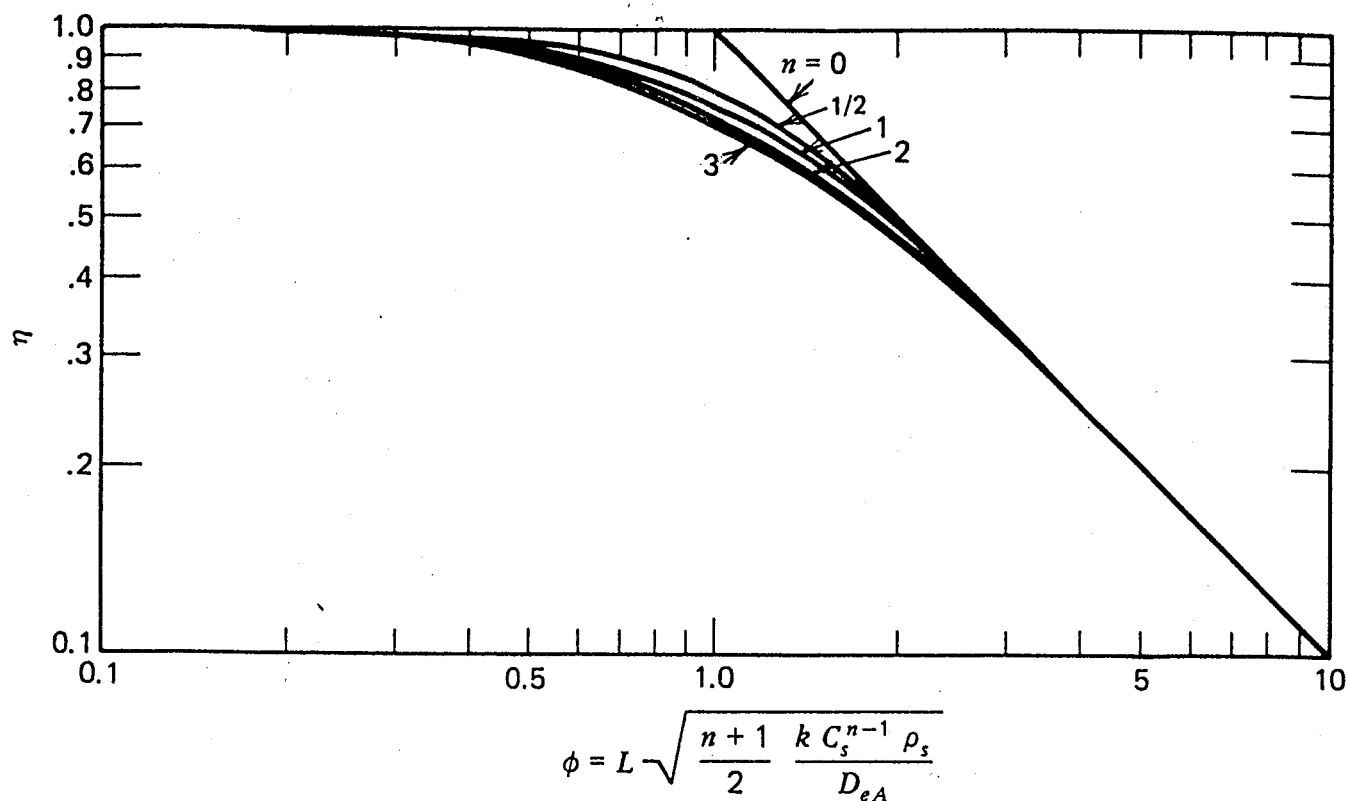


Figure 3.6.2-1

Relationship of η versus generalized modulus for simple-order reactions.

Generalized modulus for any geometry in Hill
nomenclature:

$$\phi = \frac{V_p}{S_x} \sqrt{\frac{N+1}{2} \frac{k_N'' \rho_s S_g C_o^{N-1}}{D_{eff}}}$$

Approximate solution for any order, any
geometry:

$$\eta = \frac{1}{\phi} \left[\frac{1}{\tanh(3\phi)} - \frac{1}{3\phi} \right]$$