

Figure 1-3 Perfect plane waves with constant phase or wave front. The waves depicted in (a) illustrate spatial coherence, where waves with equal phase and wavelength are superimposable at any distance along the axis of propagation. The waves illustrated in (b) are characterized by temporal coherence and are superimposable at any time. Loss of spatial coherence is indicated in (c): The wave fronts remain coherent as they travel over the distance  $l_c$ .

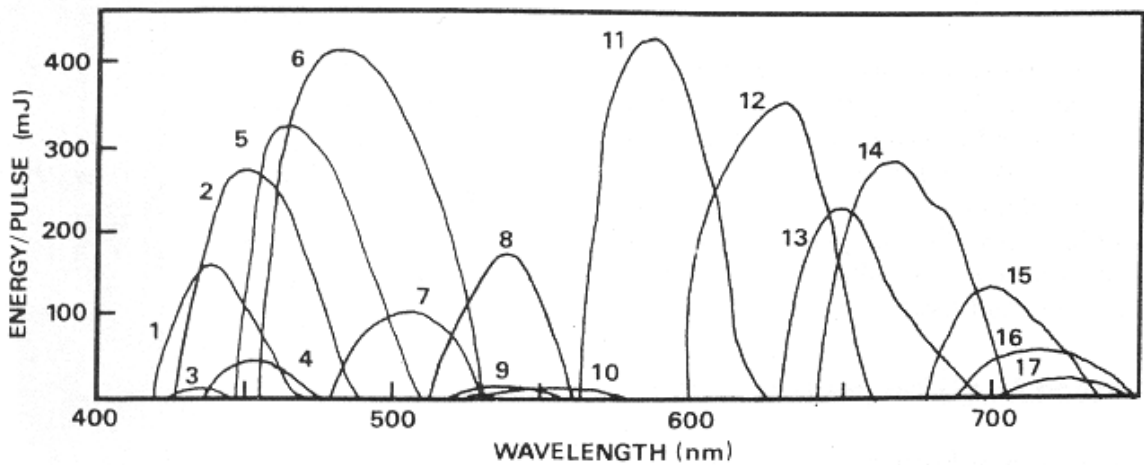


Figure 3. Experimental tuning or gain curves for seventeen dyes using a coaxial flashlamp-pumped laser (19). The "gain curve" for a particular dye is the spectral region where the excited molecule exhibits gain in excess of losses within an optical cavity (i.e., amplification of stimulated emission). 1: Coumarin 120. 2: 4,6-dimethyl-7-ethylaminocoumarin. 3: Carbostryl 165. 4: 4-methyl-umbelliferone. 5: Esculine monohydrate. 6: Coumarin 102. 7: Coumarin 30. 8: Coumarin 6. 9: disodium fluorescein. 10: 4-amino-1,8 naphthalimide. 11: Rhodamine 6G. 12: Kiton Red S. 13: Cresyl violet acetate. 14: Cresyl violet nitrate. 15: Carbazine. 16: Nile blue nitrate. 17: Oxazine 1 perchlorate.