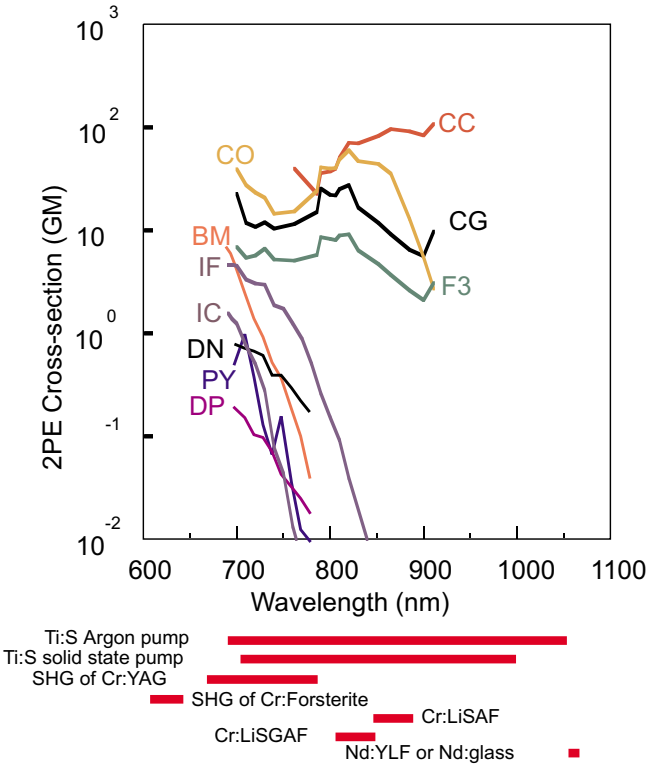

FIGURE 4-3 Two-photon fluorescence excitation spectra of fluorophores. For BM, data are for the two-photon absorption cross-sections. For all the other fluorophores, data are for the two-photon action cross-section (i.e., the product of the fluorescence emission quantum efficiency and the two-photon absorption cross-section). 1 GM $\equiv 10^{-50}$ cm^4 s/photon. Spectra are excited with linearly polarized light using a mode-locked Ti : sapphire laser. For comparison, the tuning ranges of conveniently available mode-locked laser sources are also plotted. The fluorophores illustrated are as follows: BM $\equiv$ *p*-bis(*o*-methylstyryl)benzene; DP (DAPI not DNA-bound) $\equiv$ 4′,6-diamidino-2-phenylindole, dihydrochloride; DN (dansyl) $\equiv$ 5-dimethylaminonaphthalene-1-sulfonylhydrazine; PY $\equiv$ 1,2-bis-(1-pyrenedecanoyl)-*sn*-glycero-3-phosphocholine; IC $\equiv$ indo-1 with Ca^{2+}; IF $\equiv$ indo-1 without Ca^{2+}; CG $\equiv$ calcium green-1 with Ca^{2+}; CO $\equiv$ calcium orange with Ca^{2+}; CC $\equiv$ calcium crimson with Ca^{2+}; F3 $\equiv$ fluo-3 with Ca^{2+}. All of the samples were purchased from either Eastman Kodak or Molecular Probes. Note that the *y* axis is a logarithmic scale.