We report the first application of pulsed resonance Raman spectroscopy to the study of short-lived free radicals produced by pulse radiolysis. A single pulse from a flash-lamp pumped tunable dye laser is used to excite the resonance Raman spectrum of the p-terphenyl anion radical with an initial concentration of $4 \times 10^{-5}$ moles per liter and a half life of 2 μs. The spectrum is recorded by an optical multichannel system consisting of an image intensifier coupled to a TV-camera.