

Re: Most Efficient Light Source??

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 - *Date:* 19 Nov 2005 13:05:34 -0800
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Well, regarding the nanotube claim specifically, it's from Phaedon Avouris, a respected researcher from IBM's Watson Research Center.

What exactly is happening in that nanotube setup, that's making the electron-hole pair creation and annihilation so much more efficient? Can anybody explain that? We've heard how nanotube tips have unprecedentedly low work function, so that they can be the world's most efficient cathode ray emitters. This seems to be due to the sudden curvature of the nanotube tip relative to the lengthwise span of the nanotube. Obviously even the suddenness of that curvature is only possible due to the unprecedented strength of the nanotube's lattice structure.

So is this photon emission thing possibly another example of the nanotube's structure parlaying itself into better photo-emissive properties? They mention the lattice strain seems to be playing a role, so is that fullerene lattice strength allowing something special here?

- *References:*
 - ◆ ***Most Efficient Light Source??***
 - ◇ *From:* manofsan@xxxxxxxx
 - ◆ ***Re: Most Efficient Light Source??***
 - ◇ *From:* Fritz Schlunder
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