

Title (en)
METAL VANADIUM OXIDE PARTICLES

Title (de)
METALLTEILCHEN MIT VANADIUMOXID

Title (fr)
PARTICULES METALLIQUES A L'OXYDE DE VANADIUM

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Application
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Abstract (en)
[origin: WO0046867A1] Metal vanadium oxide particles have been produced with an average diameter less than about 500 nm. The metal vanadium oxide particles have very uniform properties. In some embodiments, silver vanadium oxide particles are formed by the heat treatment of a mixture of nanoscale vanadium oxide and a silver compound. Other metal vanadium oxide particles can be produced by similar processes. In other embodiments, laser pyrolysis is used to produce directly metal vanadium oxide composite nanoparticles. To perform the pyrolysis a reactant stream is formed including a vanadium precursor and a second metal precursor. The pyrolysis is driven by energy absorbed from a light beam. Metal vanadium oxide nanoparticles can be incorporated into a cathode of a lithium based battery to obtain increased energy densities. Implantable defibrillators can be constructed with lithium based batteries having increased energy densities.

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