

Title (en)
HIGH ENERGY DENSITY CAPACITOR AND WIRELESS CHARGING SYSTEM

Title (de)
KONDENSATOR MIT HOHER ENERGIEDICHTE UND DRAHTLOSES LADESYSYSTEM

Title (fr)
CONDENSATEUR À HAUTE DENSITÉ D'ÉNERGIE ET SYSTÈME DE CHARGE SANS FIL

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Application
EP 18806703 A 20180525

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Abstract (en)
[origin: CN111052279A] A high energy density capacitor comprising a substrate, a positive electrode, a negative electrode, a plurality of intermediate dielectric layers and a metal layer deposited on each of the intermediate dielectric layers. Each intermediate dielectric layer comprises sequential layers of a high surface area dielectric material, an electrolyte and a polar organic solvent deposited onto the substrate. The plurality of intermediate dielectric layers and metal layers are arranged in series to form a stack, and at least one an internal passivation layer is disposed between each stack. The positive and negative electrodes extend along a height of the capacitor and have poles in an alternating arrangement around an edge thereof. Dipoles of the intermediate dielectric layers are aligned in an opposite direction of an electric field created between the positive and negative electrodes while charging.

IPC 8 full level
H01G 9/00 (2006.01); **H01G 4/33** (2006.01); **H01G 9/022** (2006.01); **H01G 9/07** (2006.01); **H01G 11/54** (2013.01); **H01L 49/02** (2006.01)

CPC (source: EP)
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Citation (search report)

- [XY] EP 1732146 A1 20061213 - KYOCERA CORP [JP]
- [YA] WO 2007012484 A1 20070201 - SIEMENS AG [DE], et al
- [A] WO 2010029161 A1 20100318 - IMEC [BE], et al
- [A] EP 0490240 A2 19920617 - MICRON TECHNOLOGY INC [US]
- [A] US 2015062780 A1 20150305 - GADKAREE KISHOR PURUSHOTTAM [US], et al
- [A] US 2008316678 A1 20081225 - EHRENBERG SCOTT G [US], et al
- [A] US 2004175561 A1 20040909 - DUFF WILLIAM B [US]
- [A] US 2014367757 A1 20141218 - JAKUSHOKAS RENATAS [US], et al
- See references of WO 2018218164A1

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