Title (en)

INTEGRATABLE CAPACITOR

Title (de)

INTEGRIERBARER KONDENSATOR

Title (fr)

CONDENSATEUR INTÉGRABLE

Publication

EP 3966875 A1 20220316 (DE)

Application

EP 20718268 A 20200403

Priority

- DE 102019002515 A 20190405
- EP 2020059657 W 20200403

Abstract (en)

[origin: WO2020201547A1] The capacitor comprises: a first porous semiconductor with an average pore size ranging between 20 nm and 200 nm, preferably between 40 nm and 100 nm, and at least one second electric conductor, wherein the second electric conductor infiltrates the porous structure, and the involved materials are selected such that a potential barrier is formed between the first porous semiconductor and the second conductor without applying an external voltage as a result of the diffusion of load carriers, said voltage equaling preferably more than 0.5 V, particularly more than 0.7 V, particularly more than 1 V, particularly more than 1.4 V. A dielectric layer with a thickness of 1 nm to 10 nm is arranged preferably between the first porous semiconductor and the second electric conductor.

IPC 8 full level

H01L 49/02 (2006.01); **H01G 4/008** (2006.01); **H01G 4/012** (2006.01); **H01L 29/94** (2006.01)

CPC (source: EP US)

H01G 4/008 (2013.01 - EP); **H01G 4/012** (2013.01 - EP); **H01G 4/18** (2013.01 - EP); **H01G 4/33** (2013.01 - EP); **H01L 28/90** (2013.01 - EP); **H01L 29/247** (2013.01 - US); **H01L 29/92** (2013.01 - US); **H01L 29/945** (2013.01 - EP); Y02E 60/13 (2013.01 - EP)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020201547 A1 20201008; EP 3966875 A1 20220316; US 11935968 B2 20240319; US 2023069645 A1 20230302

DOCDB simple family (application)

EP 2020059657 W 20200403; EP 20718268 A 20200403; US 202017634811 A 20200403