

Title (en)  
ACOUSTIC METAMATERIAL AND PROCESS FOR MANUFACTURING THE SAME

Title (de)  
AKUSTISCHES METAMATERIAL UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)  
MÉTAMATÉRIAU ACOUSTIQUE ET SON PROCÉDÉ DE FABRICATION

Publication  
**EP 4030420 A1 20220720 (EN)**

Application  
**EP 21382026 A 20210115**

Priority  
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Abstract (en)  
An acoustic metamaterial, which comprises at least one resonating layer (2a, 2b) made of a single material having a constant resonating thickness ( $t_{>2}$ ) and a plurality of resonating unit cells (20); wherein each resonating unit cell (20) comprises a resonating opening (21) and a resonating element (22) extending into said resonating opening (21); wherein the resonating elements (22) are coplanar to the resonating layer (2a, 2b), having said resonating layer (2a, 2b) and said resonating elements (22) the same constant resonating thickness ( $t_{>2}$ ). A process for manufacturing an acoustic metamaterial, comprising the steps of laminating a solid single material to obtain an unfinished resonating layer of a constant resonating thickness ( $t_{>2}$ ); and die cutting the unfinished resonating layer to obtain a resonating layer (2a, 2b) having a plurality of resonating unit cells (20).

IPC 8 full level  
**G10K 11/172** (2006.01); **G10K 11/168** (2006.01); **G10K 1/06** (2006.01); **G10K 11/00** (2006.01)

CPC (source: EP)  
**G10K 11/168** (2013.01); **G10K 11/172** (2013.01); **G10K 1/06** (2013.01); **G10K 11/002** (2013.01)

Citation (search report)

- [X] JP 2019045789 A 20190322 - ASAHI KASEI CORP
- [A] CN 108447467 A 20180824 - CHONGQING SUKUO INTELLIGENT TECH CO LTD
- [A] US 2019333495 A1 20191031 - LEE TAEHWA [US], et al
- [A] US 2019035373 A1 20190131 - CHUNREN YU [CN], et al

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)  
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DOCDB simple family (application)  
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