



# SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 17 81 39 33

**Classification of the application (IPC):**  
H01L 29/12, H01L 33/00, H01L 29/36, H01L 21/20

**Technical fields searched (IPC):**  
H01L

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X,P	WO 2017069962 A1 (QUORA TECH INC [US]) 27 April 2017 (2017-04-27) * figure 5 *	1-15
Y	US 2012052635 A1 (KANG PIL-KYU [KR] ET AL) 01 March 2012 (2012-03-01) * paragraphs [0036] - [0048]; figure 1 *	1-15
Y	US 7732301 B1 (PINNINGTON THOMAS HENRY [US] ET AL) 08 June 2010 (2010-06-08) * columns 20-26; figure 2 *	1-15
Y	US 2013234148 A1 (WERKHOVEN CHRISTIAAN J [US]) 12 September 2013 (2013-09-12) * paragraphs [0004] - [0006]; figures *	4-15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 20 January 2020	Examiner Wolff, Gerhard
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## CATEGORY OF CITED DOCUMENTS

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|---|--|
| X: particularly relevant if taken alone   | P: intermediate document   |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention                        |
| A: technological background   | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure   | D: document cited in the application                                   |
| & : member of the same patent family, corresponding document                    | L: document cited for other reasons                                    |

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# ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 20-01-2020  
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