Title (en)
METHOD FOR DESIGNING A HIGH SENSITIVITY INTEGRATED COMPUTATIONAL ELEMENT

Title (de)
VERFAHREN ZUM ENTWURF EINES HOCHEMPFINDLICHEN INTEGRIERTEN RECHNERISCHEN ELEMENTS

Title (fr)
PROCÉDÉ DE CONCEPTION D'UN ÉLÉMENT DE CALCUL INTÉGRÉ À HAUTE SENSIBILITÉ

Publication
EP 3271794 A4 20181114 (EN)

Application
EP 15885729 A 20150317

Priority
US 2015021054 W 20150317

Abstract (en)
[origin: WO2016148706A1] A system and method to design highly-sensitive Integrated Computational Elements for optical computing devices. A harmonic line shape is defined and used to simulate an optical response function which has a plurality of parameters that are varied until an ideal optical response function is determined. The ideal optical response function will be that function which maximizes the output sensitivity and/or minimizes the Standard Error of Calibration. Thereafter, the method designs a film stack having an optical response function that matches the ideal transmission function, and an ICE is fabricated based upon this design.

IPC 8 full level
G06F 17/50 (2006.01); E21B 47/00 (2012.01); G01V 3/18 (2006.01); G01V 3/38 (2006.01); G02B 5/28 (2006.01); G02B 27/00 (2006.01); G06F 1/16 (2006.01)

CPC (source: EP US)
G02B 5/281 (2013.01 - EP); G02B 27/0012 (2013.01 - EP US); G06F 30/00 (2020.01 - EP); G06F 30/30 (2020.01 - EP)

Citation (search report)
- [I] WO 2014074108 A1 20140515 - HALLIBURTON ENERGY SERV INC [US], et al
- [I] WO 2014137322 A1 20140912 - HALLIBURTON ENERGY SERV INC [US]
- [I] CHRISTOPHER JONES ET AL: "Laboratory Quality Optical Analysis in Harsh Environments", PROCEEDINGS OF 2012 SPE KUWAIT INTERNATIONAL PETROLEUM CONFERENCE AND EXHIBITION, 1 January 2012 (2012-01-01), XP055091148, ISBN: 978-1-61-399263-0, DOI: 10.2118/163289-MS
- See also references of WO 2016148706A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
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DOCDB simple family (application)
US 2015021054 W 20150317; BR 112017016274 A 20150317; EP 15885729 A 20150317; SA 517381961 A 20170720