

PCT Recordation of Search History

Case/PCT Application Number: PCT/US18/39541

CLIN Number/Technical Field of PCT Application: 006

Dates During Which the Search was Conducted: 22-23/08/2018

Date of Completion of Recordation of Search History Form: 23 August 2018
(23.08.2018)

Research Analyst Initials: BOF

Search Approval Official (SAO) Initials: BSS

Field of Search/Classification Information:

IPC(8) Classifications: G02B 5/18, 6/10, 6/12, 6/124, 6/13, 3/136, 6/30 (2018.01)

CPC Classifications: G02B 5/18, 5/1819, 5/1828, 5/1847, 5/1857, 5/1861, 5/1866,
6/0016, 6/0038, 6/0065, 6/124, 6/136, 6/30

Databases Searched (Patent and Non-Patent Literature (NPL), Including Sub-Databases and Files Searched) and Search Terms Used:

PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data);
Google Scholar; EBSCO Discovery Service; IP.com; Keywords: waveguide, grating,
coupler, period, uniform, chirp, etch, mask, pattern, stop, resist, duty cycle

Database Search String Recordation, Including Dates of Searches:

Patent Database Search Strategy/Results:

Patseer

| ID | Search String | Records | Date |
|-----|--|---------|-----------|
| L20 | TACD:(period* AND uniform* AND etch* AND (mask* OR pattern*) AND (stop* OR resist*)) AND TA:(waveguide* AND (grating* W4 couple*)) AND IC:(G02B5/18 OR G02B6/10 OR G02B6/12 OR G02B6/124 OR G02B6/13 OR G02B3/136 OR G02B6/30) | 59 | 8/23/2018 |
| L19 | TACD:(period* AND uniform* AND etch* AND (mask* OR pattern*) AND (stop* OR resist*)) AND TA:(waveguide* AND (grating* W4 couple*)) AND CPC:(G02B5/18 OR G02B5/1819 OR G02B5/1828 OR G02B5/1847 OR G02B5/1857 OR G02B5/1861 OR G02B5/1866 OR G02B6/0016 OR G02B6/0038 OR G02B6/0065 OR G02B6/124 OR G02B6/136 OR G02B6/30) | 48 | 8/23/2018 |
| L18 | TACD:(period* AND uniform* AND chirp* AND etch* AND (mask* OR pattern*) AND (stop* OR resist*)) AND TA:(waveguide* AND (grating* W4 couple*)) AND CPC:(G02B5/18 OR G02B5/1819 OR G02B5/1828 OR G02B5/1847 OR G02B5/1857 OR G02B5/1861 OR G02B5/1866 OR G02B6/0016 OR G02B6/0038 OR G02B6/0065 OR G02B6/124 OR G02B6/136 OR G02B6/30) | 25 | 8/23/2018 |
| L17 | TACD:(period* AND uniform* AND chirp* AND etch* AND (mask* OR pattern*) AND (stop* OR resist*)) AND TA:(waveguide* AND (grating* W4 couple*)) AND IC:(G02B5/18 OR G02B6/10 OR G02B6/12 OR G02B6/124 OR G02B6/13 OR G02B3/136 OR G02B6/30) | 27 | 8/23/2018 |
| L16 | TACD:(period* AND uniform* AND chirp* AND etch* AND (mask* OR pattern*) AND (stop* OR resist*)) AND TA:(waveguide* AND (grating* W4 couple*)) | 36 | 8/23/2018 |
| L15 | TAC:(etch* AND (mask* OR pattern*) AND (stop* OR resist*)) AND TACD:(period* AND uniform* AND chirp*) AND TA:(waveguide* AND (grating* W4 couple*)) | 2 | 8/23/2018 |
| L14 | TAC:(period* AND uniform* AND chirp*) AND TA:(waveguide* AND (grating* W4 couple*)) | 10 | 8/23/2018 |
| L13 | TA:(waveguide* AND (grating* W4 couple*) AND period* AND uniform*) | 19 | 8/23/2018 |
| L12 | TA:(waveguide* AND (grating* W4 couple*) AND period*) | 269 | 8/23/2018 |
| L11 | TA:(waveguide* AND (grating* W4 couple*)) | 2338 | 8/23/2018 |
| L10 | TA:(waveguide* AND grating* AND couple*) | 5223 | 8/23/2018 |

| | | | |
|----|--|------|-----------|
| L9 | INV:(Chang You-Chia) | 9 | 8/23/2018 |
| L8 | INV:(Roberts Samantha P) | 0 | 8/23/2018 |
| L7 | INV:(Phare Christopher T) | 0 | 8/23/2018 |
| L6 | INV:(Zadka Moshe) | 24 | 8/23/2018 |
| L5 | INV:(Mohanty Asemma) | 1 | 8/23/2018 |
| L4 | TA:(grating* AND couple*) AND INV:(Lipson Michal) | 0 | 8/23/2018 |
| L3 | INV:(Lipson Michal) | 203 | 8/23/2018 |
| L2 | TA:(waveguide* AND grating* AND couple*) AND ASN:(Columbia University) | 0 | 8/23/2018 |
| L1 | ASN:(Columbia University) | 3116 | 8/23/2018 |

Non-Patent Literature (NPL) Search Strategy/Results:

Google Scholar

| Search terms | Date |
|---|-----------|
| waveguide grating coupler uniform chirped period | 8/23/2018 |
| waveguide grating coupler uniform chirped duty cycle | 8/23/2018 |
| waveguide grating coupler chirped duty cycle period etch mask | 8/23/2018 |
| waveguide grating coupler length period etch mask stop | 8/23/2018 |

EBSCO Discovery Service

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IP.com

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