

## SEARCH HISTORY

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|----------------------------|-----------------|
| <b>Application Number</b>  | PCT/US 19/64911 |
| <b>Search Conducted By</b> | JQ              |
| <b>Search Approved By</b>  | ADS             |

|                                         |                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>CPC/IPC Classifications Searched</b> | CPC - A61B 3/102; A61B 3/11; A61B 3/13; A61B 3/132;<br>A61F 2/1662; A61F 2002/16902; A61F 9/08<br>IPC(8) - A61B 3/11 (2020.01) |
| <b>Date Conducted</b>                   | 02 February 2020 (02.02.2020)                                                                                                  |

|                               |                                                                                                                                                               |
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| <b>Documentation Searched</b> | CPC - A61B 3/102; A61B 3/11; A61B 3/13; A61B 3/132;<br>A61F 2/1662; A61F 2002/16902; A61F 9/08<br>IPC(8) - A61B 3/11 (2020.01)                                |
| <b>Search Terms Used</b>      | Intraocular/ intra-ocular lens<br>biometer/ biometry<br>user interface<br>autorefractor<br>eye<br>training set<br>deep learning<br>formula<br>estimated error |
| <b>Date Conducted</b>         | 02 February 2020 (02.02.2020)                                                                                                                                 |

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| <b>Electronic Database Searched</b> | PatBase                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Files Searched</b>               | Full-text: AU BE BR CA CH CN DE DK EP ES FI FR<br>GB IN JP KR SE TH TW US WO<br>Bibliographic: (Europe) AT BA BE BG CH CS CY CZ<br>DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC<br>MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU<br>(Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU<br>TH TJ TW UZ VN (North America) CA CR CU DO GT<br>HN MX NI PA SV TT (South America) AR BR CL CO<br>EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE<br>MA MW OA ZA ZM ZW |
| <b>Date Conducted</b>               | 02 February 2020 (02.02.2020)                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Search Logic:**

Classification Search:

1) CPC=(A61B3/102 or A61B3/11 or A61B 3/13 or A61B3/132 or A61F2/1662 or

- A61F2002/16902 or A61F9/08) (3127)
- 2) IC=(A61B3/11) (1638)
- 3) 1 or 2 (4552)
- 4) 3 and FT=((intraocular or intra-ocular) w3 lens) (462)
- 5) 4 and FT=(biometer or biometry) (59)
- 6) 5 and FT=(autorefractor) (4)
- 7) 5 and FT=(training w3 set%) (0)
- 8) 4 and FT=(autorefractor) (12)
- 9) 8 not 6 (8)
- 10) 4 and FT=(training w3 set%) (4)
- 11) 10 not (6 or 8) (3)
- 12) 3 and FT=(deep w3 learning) (41)
- 13) 12 and FT=(training w3 set%) (12)
- 14) 13 and FT=(eye%) (12)
- 15) 14 and FT=(formula) (0)
- 16) 14 and FT=(estimated w3 error) (0)
- 17) 14 not (6 or 8 or 10) (10)

Search limited only by search terms and not by classifications:

- 18) FT=(biometer or biometry) (1356)
- 19) 18 and FT=((intraocular or intra-ocular) w3 lens) (200)
- 20) 19 and FT=(autorefractor) (23)
- 21) 20 and FT=(training w3 set%) (2)
- 22) 21 not (6 or 8 or 10 or 14) (2)
- 23) 20 and FT=(deep w3 learning) (2)
- 24) 23 not (6 or 8 or 10 or 14 or 21) (0)

F/B search:

- 25) pn=(us2015103313 or us2019110753) (2)
- 26) ctb 25 or ctf 25 (16)
- 27) 26 not (6 or 8 or 10 or 14 or 21 or 23) (16)

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| <b>Electronic Database Searched</b>                                                          | Google                        |
| <b>Files Searched</b>                                                                        | Google Patents                |
| <b>Date Conducted</b>                                                                        | 02 February 2020 (02.02.2020) |
| <b>Search Logic:</b>                                                                         |                               |
| biometer eye intraocular lens<br>About 13,800 results                                        |                               |
| biometer eye intraocular lens user interface<br>About 10,700 results                         |                               |
| biometer eye intraocular lens user interface autorefractor<br>About 386 results              |                               |
| biometer eye intraocular lens user interface autorefractor training set<br>About 314 results |                               |
| biometer eye intraocular lens user interface autorefractor deep learning                     |                               |

About 88 results

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| <b>Electronic Database Searched</b>                                                                                                                                                                                                                                                                                                                                                                                                           | Google                        |
| <b>Files Searched</b>                                                                                                                                                                                                                                                                                                                                                                                                                         | Google Scholar                |
| <b>Date Conducted</b>                                                                                                                                                                                                                                                                                                                                                                                                                         | 02 February 2020 (02.02.2020) |
| <b>Search Logic:</b>                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |
| <p>biometer eye intraocular lens<br/>About 17,600 results</p> <p>biometer eye intraocular lens user interface<br/>About 14,200 results</p> <p>biometer eye intraocular lens user interface autorefractor<br/>About 691 results</p> <p>biometer eye intraocular lens user interface autorefractor training set<br/>About 416 results</p> <p>biometer eye intraocular lens user interface autorefractor deep learning<br/>About 129 results</p> |                               |

**Supplemental Search (SAO-ADS):**

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| <b>Electronic Database Searched</b>                                                                                                                                                                                                                                                                   | PatBase                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Files Searched</b>                                                                                                                                                                                                                                                                                 | <p>Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB<br/>IN JP KR SE TH TW US WO</p> <p>Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD<br/>DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD<br/>MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia)<br/>EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW<br/>UZ VN (North America) CA CR CU DO GT HN MX NI PA<br/>SV TT (South America) AR BR CL CO EC PE UY<br/>(Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA<br/>ZM ZW</p> |
| <b>Date Conducted</b>                                                                                                                                                                                                                                                                                 | 08 February 2020 (08.02.2020)                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Search Logic:</b>                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>1 biometer AND (user w2 interface*) 19<br/>                 2 1 AND biometer AND (lens W3 parameter) 1<br/>                 3 biometer AND (lens W3 parameter) 2<br/>                 4 tac=biometer 47<br/>                 5 4 AND (deep W2 learning) 1<br/>                 6 2 OR 3 OR 5 2</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |