

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
30 December 2021 (30.12.2021)



(10) International Publication Number
WO 2021/258156 A1

(51) International Patent Classification:

A61B 6/02 (2006.01) H04N 13/00 (2018.01)
A61B 6/03 (2006.01) H05G 1/00 (2006.01)

(21) International Application Number:

PCT/AU2021/050669

(22) International Filing Date:

25 June 2021 (25.06.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/043,994	25 June 2020 (25.06.2020)	US
63/044,090	25 June 2020 (25.06.2020)	US

(71) Applicant: AUSTRALIAN LUNG HEALTH
INITIATIVE PTY LTD [AU/AU]; Suite 501, Level 5, 468
St Kilda Road, Melbourne, Victoria 3004 (AU).

(72) Inventors: FOURAS, Andreas; Suite 501, Level 5, 468 St
Kilda Road, Melbourne, Victoria 3004 (AU). CHAPMAN,
Paul; Suite 501, Level 5, 468 St Kilda Road, Melbourne,
Victoria 3004 (AU).

(74) Agent: PHILLIPS ORMONDE FITZPATRICK; Level
16, 333 Collins Street, Melbourne, Victoria 3000 (AU).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,
KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD,

(54) Title: IMAGING DEVICE AND METHOD FOR MULTIPLE IMAGE ACQUISITION

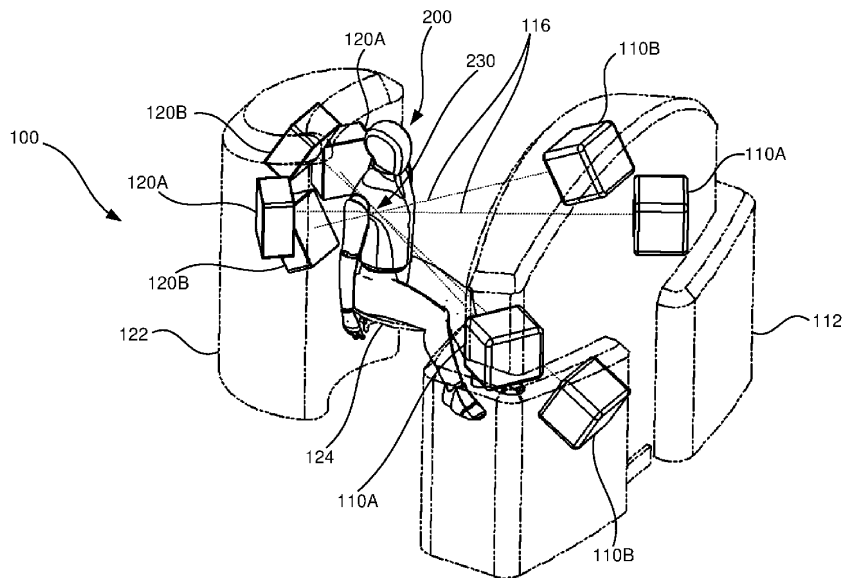


Figure 7

(57) Abstract: An imaging device for acquiring a time series of in vivo images of a region of a subject's body is provided. The imaging device includes at least three energy sources, at least three detectors for detecting energy from the at least three energy sources passing through the region of the subject's body located between the energy sources and detectors, and a controller configured to operate the energy sources and detectors to acquire a time series of in vivo images of the region of the subject's body. At least two pairs of energy sources and detectors are spatially positioned around the subject's body in a first plane, and at least one pair of energy sources and detectors is spatially positioned around the subject's body in a second plane. The first plane and the second plane intersect through the region of the subject's body to be imaged. A method for acquiring a time series of in vivo images of a region of a subject's body using the imaging device is also provided.

[Continued on next page]

WO 2021/258156 A1

ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,
SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))