



(51) International Patent Classification:
G01R 31/20 (2006.01)

(21) International Application Number:
PCT/US2011/053775

(22) International Filing Date:
28 September 2011 (28.09.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/404,234 28 September 2010 (28.09.2010) US

(71) Applicant (for all designated States except US): **ADVANCED INQUIRY SYSTEMS, INC.** [US/US]; 20520 Northwest Evergreen Parkway, Suite 100, Hillsboro, OR 97124 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DURBIN, Aaron** [US/US]; C/o Advanced Inquiry Systems Inc., 20520 Northwest Evergreen Parks, Suite 100, Hillsboro, OR 97124 (US). **KEITH, David** [US/US]; C/o Advanced Inquiry Systems Inc., 20520 Northwest Evergreen Parkway, Suite 100, Hillsboro, OR 97124 (US). **JOHNSON, Morgan, T.** [US/US]; C/o Advanced Inquiry System Inc., 20520 Northwest Evergreen Parkway, Suite 100, Hillsboro, OR 97124 (US).

(74) Agent: **WECHKIN, John, M.**; Perkins Coie LLP, P.O. Box 1247, Seattle, WA 98111-1247 (US).

(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, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: **WAFER TESTING SYSTEMS AND ASSOCIATED METHODS OF USE AND MANUFACTURE**

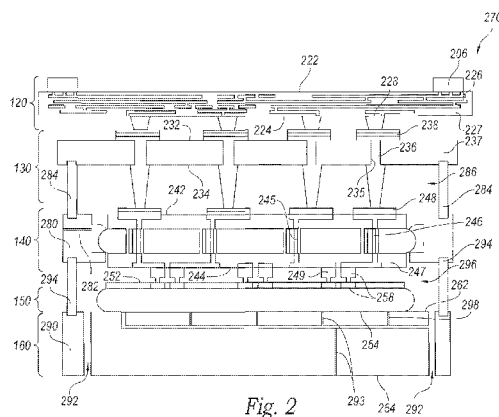


Fig. 2

(57) Abstract: Wafer testing is disclosed. A wafer testing system includes an assembly for releaseably attaching a wafer to a wafer translator and the wafer translator to an interposer by means of separately operable vacuums, or pressure differentials. The assembly includes a wafer translator support ring coupled to the wafer translator, wherein a first flexible material extends from the wafer translator support ring so as to enclose the space between the wafer translator and the interposer so that the space may be evacuated by a first vacuum through one or more first evacuation paths. The assembly can further include a wafer support ring coupled to the wafer and the chuck, wherein a second flexible material extends from wafer support ring so as to enclose the space between the wafer and the wafer translator so that the space may be evacuated by a second vacuum through one or more second evacuation pathways.

