



(51) International Patent Classification:

G06N 3/08 (2006.01) G05B 19/00 (2006.01)
G06N 3/00 (2006.01) G05B 19/18 (2006.01)

(21) International Application Number:

PCT/US2021/038085

(22) International Filing Date:

18 June 2021 (18.06.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/040,792 18 June 2020 (18.06.2020) US
17/091,393 06 November 2020 (06.11.2020) US
17/195,746 09 March 2021 (09.03.2021) US

(71) Applicant: NANOTRONICS IMAGING, INC. [US/US];
2251 Front Street, Suite 110, Cuyahoga Falls, OH 44223
(US).

(72) Inventors: SUNDSTROM, Andrew; 2251 Front Street,
Suite 110, Cuyahoga Falls, OH 44223 (US). KIM, Eun-
Sol; 2251 Front Street, Suite 110, Cuyahoga Falls, OH

44223 (US). LIMOGÉ, Damas; 2251 Front Street, Suite
110, Cuyahoga Falls, OH 44223 (US). PINSKIY, Vadim;
2251 Front Street, Suite 110, Cuyahoga Falls, OH 44223
(US). PUTMAN, Matthew, C.; 2251 Front Street, Suite
110, Cuyahoga Falls, OH 44223 (US).

(74) Agent: WOLFE, Joseph et al.; DLA Piper LLP US, 33
Arch Street, 26th Floor, Boston, MA 02110 (US).

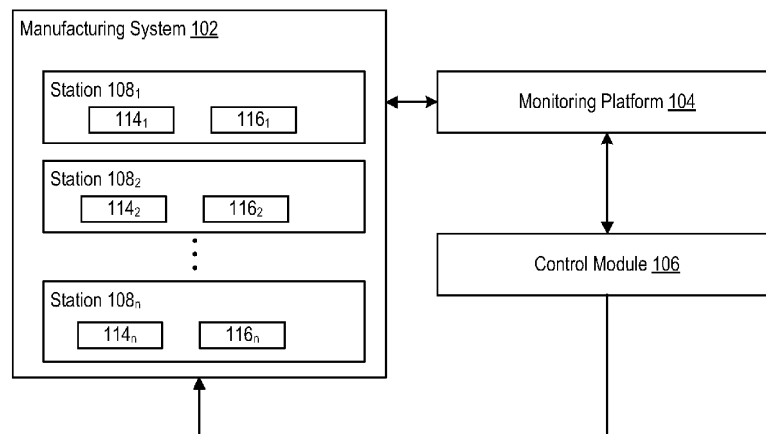
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS,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

(54) Title: SYSTEMS, METHODS, AND MEDIA FOR MANUFACTURING PROCESSES

100

FIG. 1



(57) Abstract: A manufacturing system is disclosed herein. The manufacturing system includes one or more stations, a monitoring platform, and a control module. Each station of the one or more stations is configured to perform at least one step in a multi-step manufacturing process for a component. The monitoring platform is configured to monitor progression of the component throughout the multi-step manufacturing process. The control module is configured to dynamically adjust processing parameters of each step of the multi-step manufacturing process to achieve a desired final quality metric for the component.

[Continued on next page]

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))*