

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

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2020/157630 A1

(43) International Publication Date
06 August 2020 (06.08.2020)

(51) International Patent Classification:
C08F 120/06 (2006.01) C08F 2/38 (2006.01)

(21) International Application Number:
PCT/IB2020/050612

(22) International Filing Date:
27 January 2020 (27.01.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/797,555 28 January 2019 (28.01.2019) US

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(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, 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,
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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

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

(54) Title: HIGH MOLECULAR WEIGHT POLY(METHACRYLIC ACID)

(57) Abstract: The invention is generally related to a process for producing a relatively high molecular weight poly(methacrylic acid) ("PMAA") in a water-based system. The process of the invention comprises polymerization of from about 1% to about 20% by weight of methacrylic acid in water or a water-based system in the presence of thiol compound and an azo radical initiator under controlled reaction and process conditions. A process of the invention can be easily scaled up into the pilot scale for producing large quantities of high molecular weight PMAAs. The invention is also related to high molecular weight poly(methacrylic acid)s obtained according to a process of the invention.



WO 2020/157630 A1