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- (71) **Applicant: SABIC GLOBAL TECHNOLOGIES B.V.**
[NL/NL]; Plasticslaan 1, 4612 PX Bergen op Zoom (NL).
- (72) **Inventors: SANKAR, Ashwin Ravi;** Plot No. 81 to 85, Chikkadunnasandra Village, Anekal Taluk, Off Sarjapura-Attibele State Highway, near St. Philomena School, Bengaluru 562125 (IN). **ALGOBLAN, Mansour Ibraheem;** Plot No. 81 to 85, Chikkadunnasandra Village, Anekal Taluk, Off Sarjapura-Attibele State Highway, near St. Philomena School, Bengaluru 562125 (IN).
- (74) **Agent: SABIC INDIA INTELLECTUAL PROPERTY GROUP;** P.O. Box 3008, 6160 GA Geleen (NL).
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(54) **Title:** SYSTEMS AND METHODS FOR SEPARATING A GAS MIXTURE THAT INCLUDES ORGANIC AND INORGANIC COMPOUNDS

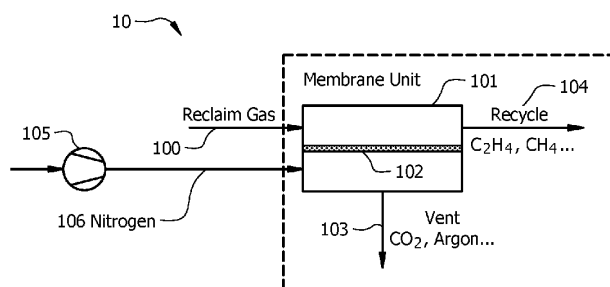


FIG. 1

(57) **Abstract:** Systems and methods for separating a gas mixture of organic gaseous compounds and inorganic gaseous compounds are disclosed. The systems include a membrane unit with a membrane element that is at least partially coated with an organic liquid. The methods include using a membrane unit with the membrane element at least partially coated with an organic liquid to separate a gas mixture of organic gaseous compounds and inorganic gaseous compounds.