

《1級・化学》

【解答にあたっての注意】

1. \*\*\*START\*\*\*から\*\*\*END\*\*\* までを和訳してください。
2. 問題は3題あります。それぞれの問題の指示に従い3題すべて解答してください。
3. 課題文に段落番号がある場合、これを訳文に記載してください。
4. 課題に図面が添付されている場合、該当する図面を参照してください。

※図面添付のない場合もごさいます。

★「課題図表の表示／非表示」リンクで表示

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[問 1] 次のクレームを日本語に直してください。各クレームは【請求項1】のように見出しを付けてください。

\*\*\*START\*\*\*

1. A process for producing discrete solid beads of polymeric material, said process comprising the steps of:
  - (a) forming a combined stream from a stream of a polymerizable liquid precursor and a stream of a liquid dispersion medium with which the liquid precursor is substantially or completely immiscible;
  - (b) treating the combined stream so as to disperse the polymerizable liquid precursor as droplets in the dispersion medium;
  - (c) allowing the droplets to polymerize in a laminar flow of the dispersion medium so as to form discrete solid beads that cannot agglomerate; and
  - (d) recovering the beads from the dispersion medium, the dispersive treatment time being short compared to the laminar flow polymerization time so that agglomeration of the liquid precursor during dispersive treatment is substantially avoided.
2. The process of claim 1, wherein the stream of polymerizable liquid precursor comprises polymerizable components in solution in a first polar organic liquid, and the liquid dispersion medium comprises a second non-polar organic liquid, the first and second organic liquids being substantially immiscible.
3. The process of claim 2, which comprises combining a first component stream comprising a phenolic nucleophilic component dissolved in a pore former with a second

component stream of cross-linking agent dissolved in the pore former.

\*\*\*END\*\*\*

[問2] 次の英文を日本語にしてください。解答には段落番号を忘れずに入れてください。

\*\*\*START\*\*\*

[0001] In its broadest sense, a “polyionic salt” or “PIS” is a salt formed between a polyionic species or “polyon” as described herein and one or more counterions of equal total charge. If a polyon has three cationic groups then one or more counterions would be necessary to provide a charge balance, e.g.,  $-3$ . This could be achieved by using three monoanionic species, one monoanionic species and one dianionic species, or one trianionic species.

[0002] The resulting salt in accordance with the invention is preferably a liquid at a temperature at about  $100^{\circ}\text{C}$  or lower, more preferably at  $25^{\circ}\text{C}$  or lower. A polyon, as used herein, refers to an ion, either a cation or an anion, which has  $n$  charges, where  $n$  is at least 3, i.e.,  $n$  is 3, 4, 5 or an integer greater than 5.

[0003] As used herein, this term is not meant to embrace a single charged species that has the specific total charge, e.g., a  $+3$  ion such as  $\text{Al}^{+3}$  or a  $-3$  ion such as  $\text{PO}_3^{-3}$ . Rather it contemplates a single molecule with at least three discrete monoionic groups, each individually covalently bound to a central group.

[0004] As used herein, the term “covalently bound” is meant that the two molecular moieties, e.g., a monoionic group and the central group, are linked via a covalent bond. Preferably, the monoionic groups do not form a covalent bond directly with each other. Preferably, the central group is not charged.

\*\*\*END\*\*\*

[問3] 次の英文を日本語にしてください。解答には段落番号を忘れずに入れてください。

\*\*\*START\*\*\*

[0005] The zeolite used in either or both of the sequential alkylation zones, with or without a binder, can be formed into various shapes such as pills, pellets, extrudates, spheres, etc. Preferred shapes are extrudates and spheres. Extrudates are prepared by conventional means which involves mixing of zeolite either before or after adding metallic components, with the binder and a suitable peptizing agent to form a homogeneous dough or thick paste having the correct moisture content to allow for the formation of extrudates with acceptable integrity to withstand direct calcination.

[0006] The dough then is extruded through a die to give the shaped extrudate. A multitude of different extrudate shapes are possible, including, but not limited to, cylinders, cloverleaf, dumbbell and symmetrical and asymmetrical polylobates. It is also within the scope of this disclosure that the extrudates may be further shaped to any desired form, such as spheres, by any means known to the art.

\* \* \* END \* \* \*