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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REACTIVE SURFACES LTD., LLP,
Petitioner,

v.

TOYOTA MOTOR CORPORATION,
Patent Owner.

Case IPR2018-01194
Patent 9,193,873 B2

Before SUSAN L.C. MITCHELL, CHRISTOPHER M. KAISER, and MICHELLE N. ANKENBRAND, *Administrative Patent Judges*.

MITCHELL, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Reactive Surfaces Ltd., LLP ("Petitioner") filed a Petition to institute an *inter partes* review of claims 1–5 of U.S. Patent 9,193,873 B2 (the "'873 patent"). Paper 2 ("Pet."). Toyota Motor Corporation ("Patent Owner")[1] filed a Preliminary Response to the Petition. Paper 7 ("Prelim. Resp.").

We have authority under 35 U.S.C. § 314(a) to determine whether to institute an *inter partes* review. To institute an *inter partes* review, we must determine that the information presented in the Petition shows "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). On April 24, 2018, the Supreme Court held that a decision to institute under 35 U.S.C. § 314(b) may not institute review on less than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu,* 138 S. Ct. 1348, 1355–56 (2018). Also, in accordance with USPTO Guidance, "if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition." *See Guidance on the Impact of SAS on AIA Trial Proceedings* (April 26, 2018) (available at https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial).

Applying those standards, and upon consideration of the information presented in the Petition and the Preliminary Response, we conclude that Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of any challenged claim of the '873 patent. Therefore, we do not institute an *inter partes* review of claims 1–5 of the '873 patent.

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[1] Patent Owner identifies the Regents of the University of Minnesota as a co-assignee of the subject patent. *See* Paper 6, 1.

A. *Related Proceedings*

Patent Owner identifies a declaratory judgment action filed by Petitioner against Patent Owner in district court concerning a declaration of rights with respect to the application that resulted in the '873 patent. *See* Paper 6, 2 (citing *Reactive Surfaces Ltd. LLP v. Toyota Motor Corporation*, Case No. 1:14-CV-1009-LY (W.D. Tex.)). Patent Owner states that the complaint was dismissed without prejudice. *Id*. Petitioner identifies a second case that it filed against Patent Owner also seeking declaratory judgment with regard to certain rights in the '873 patent: *Reactive Surfaces Ltd. LLP v. Toyota Motor Corporation*, Case No. 1:13-CV-1098-LY (W.D. Tex.). Pet. 2.

Patent Owner also identifies three other petitions for *inter partes* reviews that Petitioner has filed concerning other patents owned or co-owned by Patent Owner: IPR2016-01462 (U.S. Patent No. 8,324,295 B2); IPR2016-01914 (U.S. Patent No. 8,394,618 B2); and IPR2017-00572 (U.S. Patent No. 8,252,571 B2), which Petitioner states the Board instituted. Paper 6, 2; Pet. 2.

B. *The '873 Patent (Ex. 1001)*

The '873 patent describes a protein-polymer composite material for removing bioorganic stains from a surface produced by mixing an aqueous solution containing bioactive proteins, such as amylases, with an admixture of a polymer resin, a surfactant, and a non-aqueous organic solvent. Ex. 1001, Abst., 1:33–56. The resulting emulsion from such a mixture is then mixed with a crosslinker producing a curable composition that, when

cured, produces a protein-polymer composite material that is useful for facilitating removal of bioorganic stains. *Id.*

Figure 1B of the '873 patent, shown below, illustrates a flow diagram of a process to manufacture a bioactive material according to an embodiment of the claimed invention.

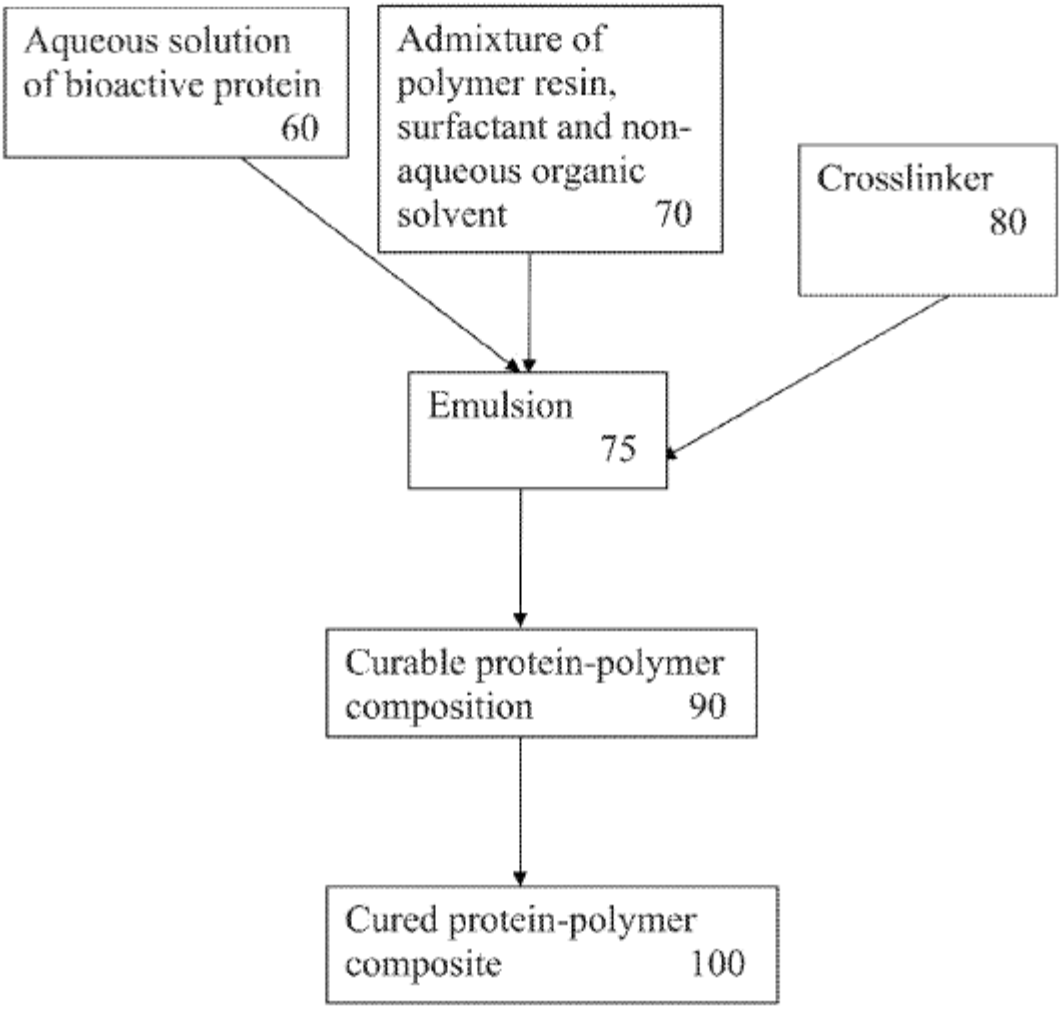

Figure 1B depicted above shows the creation of an emulsion with a bioactive protein to which a crosslinker is added, and the resulting mixture is

then cured to make the protein-polymer composite. *See* Ex. 1001, 9:48–56.

The Specification of the '873 patent further states:

> Curable protein-polymer compositions according to embodiments of the present invention include two-component solvent-borne (2K SB) compositions optionally where the two components are mixed shortly before use, for instance, application of the curable protein-polymer composition to a substrate to form a bioactive coating such as a bioactive clear coat. Generally described, the first component contains a crosslinkable polymer resin and the second component contains a crosslinker. Thus for example, referring to FIG. 1B, the emulsion **75** is a first component containing a crosslinkable resin and the crosslinker **80** is a second component, mixed together to produce the curable protein-polymer composition.

Id. at 10:4–16.

The Specification of the '873 patent defines a "bioorganic stain" as "a stain mark, or residue left behind after an organic material contacts a surface." *Id*. at 3:38–40. Some examples include food, such as starch containing foods; insect wings, legs, or other appendages; bird droppings; and fingerprints. *Id*. at 3:40–50.

The Specification of the '873 patent describes the active agent as one or more amylases or analogues thereof that can aid in removal of one or more starches. *Id*. at 3:50–54. Specifically, it is disclosed that:

> It was unexpectedly discovered that amylases are superior proteins for incorporation into protein-polymer materials. Amylases are both stable in polymeric materials and show unexpectedly high activity toward particular bioorganic stains such as stains from foods. More surprisingly, amylases show significant heat and time stability when incorporated into 2K solvent borne (SB) coatings as compared to other coating types such as water borne (WB) coatings. This unexpectedly high stability is particularly observed in 2K solvent-borne polyurethane coatings.

Id. at 3:55–64.

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