

The opinion in support of the decision being entered today is not binding precedent of the Board.

Paper No. 29

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

SATOSHI TAKECHI
Junior Party
(U.S. Application 08/800,227),

v.

BRIAN GOODALL, SAIKUMAR JAYARAMAN,
ROBERT SHICK, LARRY RHODES
Senior Party
(U.S. Application 09/630,894)

Patent Interference No. 104,785

Before: SPIEGEL, TIERNEY and NAGUMO, Administrative Patent Judges.
TIERNEY, Administrative Patent Judge.

FINAL JUDGMENT

The parties have reached an agreement regarding the issues presented in this interference. Specifically, both Takechi and Goodall have filed proposed amendments. Contingent upon entry of the amendments, Goodall has conceded priority to Takechi with respect to Goodall, U.S. Application No. 09/630,894 claims 3, 4 and 17-22. (Goodall Contingent Concession of Priority,

Paper No. 24, p. 1). Furthermore, upon entry of the proposed amendments, both parties have expressed a belief that no interference-in-fact would exist between the parties. (Paper No. 24, p. 1 and Order Setting Times, Paper No. 26, p. 2).

I. Goodall Proposed Amendment

At the time of declaration of the interference, Goodall's claims were generally directed to photoresist compositions comprising a photoacid initiator and a polymer comprising polycyclic repeating units polymerized from maleimide(s) wherein at least a portion of the polycyclic repeating units contained pendant acid labile groups. (Goodall Clean copy of Claims, Paper No. 12, claim 1). The polymer having the pendant acid labile groups could be formed by a ring-opening polymerization process. (Paper No. 12, e.g., claims 3 and 4).

Goodall has requested entry of a Proposed Amendment (Paper No. 27). The Proposed Amendment requests cancellation of Goodall claims 3-4 and 17-22 and amendment of Goodall claims 1, 25, 39, 40 and 47-49. The proposed amendment to claim 1 would limit the acid labile group containing polymers of claim 1 to "addition" polymers. (Paper No. 27). Goodall claim 38, the only other pending independent Goodall claim, already appears limited to acid labile group containing polymers formed by an addition polymerization process. Further, the claims to be cancelled by Goodall's proposed amendment, Goodall's claims 3-4 and 17-22, are generally directed towards compositions containing polymers that are formed via ring-opening polymerization. As such, upon entry of Goodall's Proposed Amendment, Goodall's claims

would be directed to photoresist compositions containing addition polymers comprising polycyclic repeating units polymerized from maleimide(s) wherein at least a portion of the polycyclic repeating units contained pendant acid labile groups.

II. Takechi's Revised Proposed Amendment

As declared, Takechi's claims are generally directed to resist materials and methods for forming a resist pattern. (Takechi Clean Copy of Claims, Paper No. 3, see, e.g., claims 1 and 6). The claims generally require the presence of a polymer formed by ring-opening metathesis polymerization ("ROMP"). (Takechi, U.S. Application No. 09/800,227, Specification, p. 6, lines 3-30). Takechi's Revised Proposed Amendment further defines the polymers, but does not alter the fact that the polymers are formed via a ROMP process. (Paper No. 28). Indeed, Takechi seeks to add new claim 14 to the application stating that the claim "recites a polymer or copolymer with a structure corresponding to ROMP polymers, which are not hydrogenated." (Paper No. 28, p. 6). Takechi states that the support for the new claim is provided by a passage in the specification, which states that the "resin is easily obtained by performing a ring-opening polymerization and a hydriding reaction following the ring-opening polymerization." (Paper No. 28, p. 7). Takechi also notes that new claim 14 is supported by the specification's teaching and depiction of the unhydrogenated polymers on p. 6 of Takechi's specification.

III. Goodall's Claimed Addition Polymers and Takechi's Claimed ROMP Polymers are Patentably Distinct Inventions

As mentioned above, Goodall's amended claims are directed to polymers formed via an addition reaction whereas Takechi's claimed polymers are formed via a ROMP process. As recognized by the prior art, the polymers formed by an addition process differ structurally from those formed via the ROMP process. Moreover, the prior art recognizes that the addition polymers and ROMP polymers possess different physical properties. For example, Goodall et al., U.S. Patent No. 5,569,730 specifically states that:

A ROMP polymer has a different structure compared with that of the addition polymer in that (i) the ROMP polymer of one or more NB-type monomers, contains a repeat unit with one less cyclic unit than did the starting monomer, and, (ii) these are linked together in an unsaturated backbone characteristic of a ROMP polymer and is shown below. [Drawing Omitted]

It will now be evident that, despite being formed from the same monomer, an addition-polymerized polyNB is clearly distinguishable over a ROMP polymer. Because of the different (addition) mechanism, the repeating unit of the former has no backbone C=C unsaturation as shown below: [Drawing Omitted]

The difference in structures of ROMP and addition polymers of NB-functional monomers is evidenced in their properties, e.g., thermal properties. The addition type polymer of NB has a high T_g of about 370°C. The unsaturated ROMP polymer of NB exhibits a T_g of about 35°C., and exhibits poor thermal stability at high temperature above 200°C. because of its high degree of C=C unsaturation.

(Col. 1, line 50 to col. 2, line 13). As ROMP and addition polymers differ both in structure and in the physical properties, the parties' proposed amended claims would no longer interfere-in-fact.

IV. Both Goodall and Takechi's Proposed Amendments are Entered

Goodall does not oppose entry of Takechi's Proposed Amendment (Paper No. 23) and Takechi does not oppose entry of Goodall's Proposed Amendment (Paper No. 27). Goodall has also requested adverse judgement as to Goodall claims 3-4 and 17-22, which are generally directed to compositions containing polymers formed via ring-opening polymerization. Further, both parties have requested that no interference-in-fact be found between the parties remaining amended claims.

The parties proposed amendments to the claims clarify the scope of their respective inventions. The proposed amendments simplify the issues presented for consideration and are *entered*. Additionally, we concur with the parties assessment that the parties amended claims do not interfere-in-fact. Thus, entry of the parties' proposed amendments and Goodall's request for adverse judgment will resolve all issues in the interference. As such, we *grant* entry of Goodall's Proposed Amendment (Paper No. 27), Takechi Revised Proposed Amendment (Paper No. 28) and Goodall's Contingent Concession of Priority (Paper No. 24, p. 1).

V. Order

ORDERED that Goodall Proposed Amendment (Paper No. 27) be entered into Goodall et al, U.S. Application No. 09/630,894.

Administrative Patent Judge)

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