CLAIMS

1. An isomerization method comprising contacting a liquid containing an allyl compound as a raw material, with a phosphorus compound, and then, isomerizing the above allyl compound in the presence of a catalyst.

2. The isomerization method according to Claim 1, wherein the above phosphorus compound is an organic phosphorus compound.

3. The isomerization method according to Claim 2, wherein the above organic phosphorus compound is an organic phosophine.

4. The isomerization method according to Claim 3, wherein the above organic phosphine has at least two aryl groups.

5. The isomerization method according to Claim 3 or 4, wherein the above organic phosphine is triphenyl phosphine.

6. The isomerization method according to any one of Claims 1 to 5, wherein the amount of the phosphorus compound which is contacted with the above allyl compound-containing liquid, is in a range of from 0.0001 to 10 weight%, based on the allyl compound.

7. The isomerization method according to any one of Claims 1 to 6, wherein the above allyl compound-containing liquid and the phosphorus compound are contacted to each other at temperature of at least 60°C.

8. The isomerization method according to any one of

Claims 1 to 7, which further includes a step of obtaining the above allyl compound-containing liquid by diacetoxylation of a conjugated diene.

9. The isomerization method according to any one of Claims 1 to 8, wherein the above catalyst is a liquid phase homogeneous palladium catalyst, which contains a phosphorus ligand having at least one P-O bond.

10. The isomerization method according to Claim 9, wherein the above phosphorus ligand having a P-O bond, is a bidentate phosphite.

11. The isomerization method according to Claim 9, wherein the above phosphorus ligand having a P-O bond, is a bidentate phosphoramidite.

12. A process for producing an allyl compound, which comprises forming from an allyl compound the corresponding isomerized allyl compound by using the isomerization method as defined in any one of Claims 1 to 11.

CLAIMS

[Claim 1]
An isomerization method characterized by contacting a liquid containing an allyl compound having a leaving group at the allyl position as a raw material for thirty minutes to five hours with a phosphorus compound selected from an organic phosphate, an organic phosphoramidite and an organic phosphine, and then isomerizing the leaving group of the allyl compound in the presence of a catalyst.

[Claim 2]
The isomerization method according to Claim 1, wherein the above organic phosphorus compound is an organic phosphine.

[Claim 3]
The isomerization method according to Claim 2, wherein the above organic phosphine has at least two aryl groups.

[Claim 4]
The isomerization method according to Claim 2 or 3, wherein the above organic phosphine is a triphenyl phosphine.

[Claim 5]
The isomerization method according to Claim 1, wherein the amount of the phosphorus compound which is contacted with the liquid containing the above allyl compound is in a range from 0.0001 to 10 weight %, based on the allyl compound.

[Claim 6]
The isomerization method according to Claim 1, wherein the liquid containing the above allyl compound and the phosphorus compound are contacted to each other at temperature of at least 60 °C.

[Claim 7]
The isomerization method according to Claim 1, which further includes a step of obtaining the the liquid containing above allyl compound by diacetoxylation of a conjugated diene.

[Claim 8]
The isomerization method according to Claim 1, wherein the catalyst is a liquid phase homogeneous palladium catalyst containing a phosphorus ligand having at least one P-O bond.

[Claim 9]
The isomerization method according to Claim 8, wherein the above phosphorus ligand having a P-O bond is a bidentate phosphite.

[Claim 10]
The isomerization method according to Claim 8, wherein the above phosphorus ligand having a P-O bond is a bidentate phosphoramidite.

[Claim 11]
The isomerization method according to Claim 1, wherein the above allyl compound is a 3,4-diacetoxyallyl compound, which forms, by isomerization, a 1,4-diacetoxyallyl compound as a compound corresponding to the above allyl compound.

[Claim 12]
A process for producing an allyl compound, which comprises forming from an allyl compound the corresponding isomerized allyl compound by using the isomerization method as defined in Claim 1.