
Double glass component separation

Can phase separation be used to fabricate complex glass parts?

Analogously to conventional porous glass fabrication methods, we exploit phase separation phenomena to fabricate complex glass parts displaying light-controlled multiscale porosity and dense multicomponent transparent glasses with arbitrary geometry using a desktop printer.

Does a polymeric material exhibit a phase separation-induced glass transition?

In this study, we report on a polymeric material synthesized from a blend of a high T_g polymer and a plasticizer, exhibiting a phase separation-induced glass transition around the upper critical solution temperature (UCST).

What is glass phase - crystal phase separation?

The constructed glass phase provided a coordination environment for the selective extraction of Al^{3+} and Ni^{2+} , while Mo^{6+} with high F was enriched in the molybdate phase and migrated, accompanied by one-step "glass phase - crystal phase separation" and direct recovery.

What are the factors affecting the separation of metals by glass phase extraction?

The melting temperature is one of the key influencing factors for the separation of metals by glass phase extraction. The thermal decomposition of Na_2SO_4 and the spontaneous reaction with MoO_3 require temperatures higher than $1184\text{ }^\circ\text{C}$, which corresponds to the exothermic peak of the TG-DTA curve shown in Fig. 6.

Fig. 1 (a) Thermodynamic phase diagram with a demixing curve and a T_g curve for a two-component system showing phase separation-induced glass transition. If a polymeric material ...

For many years, mixed glass containers were the go-to variant for glass disposal, but society is now aware of the need for more sustainability, climate protection, energy cost ...

As panes are becoming ever larger and the proportion of special-purpose glass is growing, the separation of insulated glass is ...

Advanced glass separation equipment plays a pivotal role in optimizing this process, ensuring high recovery rates while minimizing environmental impact. Below is a step ...

Automatic separation of insulated glass units (IGU) into undamaged components for sustainable reuse and recycling.

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Photopolymerization-induced phase separation of resins enables the high-resolution 3D printing of glass oxides with intricate shapes and distinct chemical composition.

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Structural analysis of double glass photovoltaic panels Double glass photovoltaic panel is a composite layer component composed of two tempered glass sheets and solar ...

In view of the separation problem of coarse-grained flaky silicon wafers and polyhedral glass particles, based on the theoretical analysis of the vibration separation process, this paper ...

The separation factors $\eta_{\text{Mo/Ni}}$ and $\eta_{\text{Mo/Al}}$ were as high as 65812.95 and 71944.85, respectively. The obtained results verify this method as a valuable synthetic route ...

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