CLAIMS

[Claim 1]

An apparatus that monitors abnormalities in a system including a plurality of components or products,

wherein the plurality of components or products respectively include a plurality of types of capsules that release, due to specific causes, a plurality of marker chemical substances respectively, the plurality of marker chemical substances having respectively different ion mobilities, and

the apparatus comprises an ion mobility sensor that detects the plurality of marker chemical substances.

[Claim 2]

The apparatus according to claim 1,

wherein the plurality of types of capsules respectively have a predetermined resistance to pressure, resistance to heat, weather resistance, light resistance, or chemical resistance.

[Claim 3]

Particles that generate signals for use by an ion mobility sensor, comprising:

a plurality of marker chemical substances with different ion mobilities: and

a plurality of types of capsules that encapsulate the plurality of marker chemical substances respectively and release, due to specific causes, the respective marker chemical substances.

[Claim 4]

The particles according to claim 3,

wherein the plurality of types of capsules respectively have a predetermined resistance to pressure, resistance to heat, light resistance, weather resistance, or chemical resistance.

[Claim 5]

A semifinished product including the particles according to claim 3 or claim 4.

[Claim 6]

A monitoring system comprising:

a component or product to be monitored including the particles according to claim 3 or claim 4; and

an ion mobility sensor that detects the plurality of marker chemical substances.

[Claim 7]

A control method of an apparatus that monitors a system including a plurality of components or products for abnormalities,

wherein the plurality of components or products respectively include a plurality of types of capsules that release, due to specific causes, a plurality of marker chemical substances respectively, the plurality of marker chemical substances having respectively different ion mobilities, and the apparatus includes an ion mobility sensor that detects the plurality of marker chemical substances,

and the control method comprises determining, when the ion mobility sensor detects a marker chemical substance out of the plurality of marker chemical substances, a component, product, or cause related to the marker chemical substance detected out of the plurality of components, products and causes.

CLAIMS

[Claim 1]

An apparatus that monitors abnormalities in a system including a plurality of components or products,

wherein the plurality of components or products respectively include a plurality of types of capsules that release, due to specific causes, a plurality of marker chemical substances respectively, the plurality of marker chemical substances having respectively different ion mobilities, and

the apparatus comprises an ion mobility sensor that detects the plurality of marker chemical substances.

[Claim 2]

The apparatus according to claim 1,

wherein the plurality of types of capsules respectively have a predetermined resistance to pressure, resistance to heat, weather resistance, light resistance, or chemical resistance.

[Claim 3]

Particles that generate signals with maker chemical substances for use by an ion mobility sensor, comprising:

one of a plurality of marker chemical substances with different ion mobilities: and

one of a plurality of types of capsules that encapsulate the one of the plurality of marker chemical substances and release, due to specific causes, the one of the plurality of marker chemical substances.

[Claim 4]

The particles according to claim 3,

wherein the plurality of types of capsules respectively have a predetermined resistance to pressure, resistance to heat, light resistance, weather resistance, or chemical resistance.

[Claim 5]

A semifinished product such as a paint, a resin or a member, including the particles according to claim 3 or claim 4.

[Claim 6]

A monitoring system comprising:

a component or product to be monitored including the particles according to claim 3 or claim 4; and

an ion mobility sensor that detects the plurality of marker chemical substances.

[Claim 7]

A control method of an apparatus that monitors a system including a plurality of components or products for abnormalities,

wherein the plurality of components or products respectively include a plurality of types of capsules that release, due to specific causes, a plurality of marker chemical substances respectively, the plurality of marker chemical substances having respectively different ion mobilities, and the apparatus includes an ion mobility sensor that detects the plurality of marker chemical substances,

and the control method comprises determining, when the ion mobility sensor detects a marker chemical substance out of the plurality of marker chemical substances, a component, product, or cause related to the marker chemical substance detected out of the plurality of components, products and causes.