

The Opportunity

Researchers at the National Institute of Advanced Industrial Science and Technology (AIST) of Japan have developed and patented useful image recording media. A rewritable, color image recording medium with a cholesteric liquid crystal and photochromic compound sandwiched between two substrates. The material also is optionally heat-sensitive.

Product Applications

Numerous applications for this technology include:

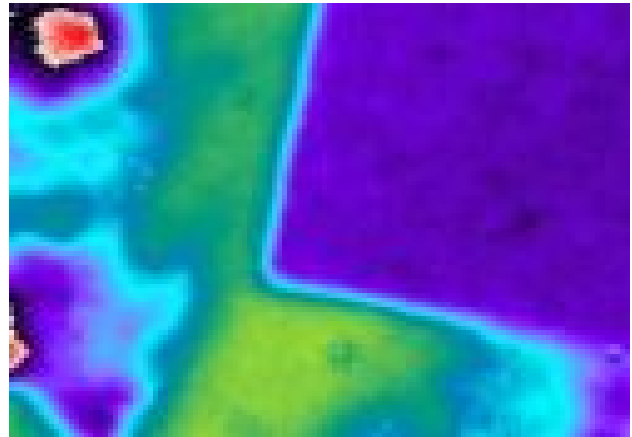
- Membership card for retail stores & supermarkets;
- Mass transit/Commuter pass;
- Banking and ATMs;
- Medical insurance card;
- Company ID and badge;
- Driver's license.

Used as a membership card, for instance, the technology enables changes to be made easily to logos and advertising slogans, access/locations, organizational status, account numbers, and other personally-tailored data.

If present, the heat-sensitive layer is comprised of about 90% by weight of the liquid crystal compound and may contain additives such as a pigment, dye, or oxidation resisting agent.

Five patents protect media materials and methods:

US Patent	Features
6,197,460	• A rewritable, heat sensitive recording medium and method for providing a color image.
6,103,431	• A rewritable recording medium with a cholesteric liquid crystal and photochromic compound as a heat-sensitive, intermediate layer to enable color images.
6,183,666	• Cholesteryl compound with liquid crystalline properties to enable full-color and rewritable recording simultaneously.
6,524,759	• Reversible recording medium and method using a cholesteric, liquid crystalline material to provide multi-color images with high contrast. Imparts a high degree of whiteness on paper-like backgrounds.
6,537,711	• A mixture of two, compatible, cholesteric liquid crystal compounds with heat sensitivity that enables reversible, color recording capability.



Intellectual Capital

AIST (National Institute of Advanced Industrial Science and Technology) is Japan's extensive public research organization established in 2001. AIST and its predecessors have advanced technology and supported Japanese industries since 1876.

Although not specifically a government institution, AIST is largely funded by the Japanese government.

Comprised of more than 50 autonomous research units in various innovative research fields and employs about 2500 research scientists and well over 3000 visiting scientists.

AIST Home Page:

www.aist.go.jp/aist_e/about_aist/index.html

For More Information

AIST is seeking to license this technology and provide assistance with its commercialization success to qualified organizations.

Consideration will be provided to a range of financial, strategic, and commercial investment options.

Certain circumstances will warrant consideration for nominal funding from AIST.

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