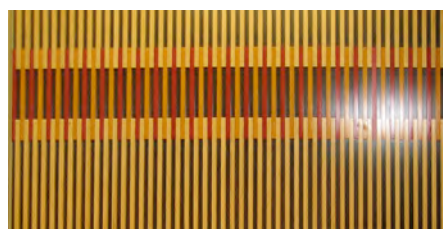


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「新日本様式」100選

A Message to the World  
From a Beautiful Wooded Country, Japan  
Blessed with Beautiful Forests, Clean Water and Air



Narita International Airport Terminal 1

Creation of a Culture that Embraces Fire-Retardant  
Plant Resources  
and Proposal for Participation in Fire-Retardant Environmental Projects



Patent-licensed, researched, developed, manufactured and distributed by: Asano Fire-Retardant Lumber Co.,Ltd.

Exclusively distributed by: Fukui Funen Co., Ltd. and Asano Funen Co., Ltd.

# What is a Culture that Embraces Fire-Retardant Plant Resources?



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“Plant resources” are human and environment-friendly, renewable and sustainable “resources,”  
**replacing fossil and mineral resources.**

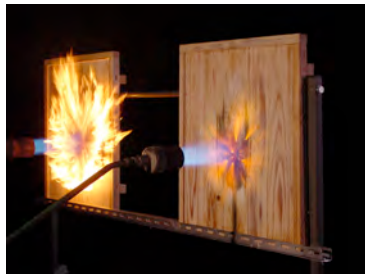
Converting such plant resources into their fire retardant counterparts allows us to change our present society, one in which we are dependent on materials made from limited fossil and mineral resources, into a society where we can create a better environment with safer and more comfortable materials and products.

People around the world are becoming increasingly aware of the creation of a human-friendly environment and a nature-oriented lifestyle, and of disaster prevention and environmental problems such as global warming.

We believe that **the conversion of plant resources for fire retardancy** is the very strategy that can positively respond to such increasing awareness.

In particular, the use of plant resources, which can fix CO<sub>2</sub>,

**greatly contributes to the reduction of CO<sub>2</sub> emissions to prevent global warming**, which is a worldwide concern.



Fire-retardant materials converted from plant resources are sustainable and **lead to a considerable decrease of CO<sub>2</sub> emissions**. They are **usually incombustible and self-extinguishing**, and **they carbonize and generate no hazardous smoke or gas which could hinder evacuation**.

When fire retardant materials are combusted, the materials emit 20-80 percent less CO<sub>2</sub> than their conventional counterparts, while being carbonized and fixed.

Fire retardant lumber, upon its production, emits approximately one seventh of the CO<sub>2</sub> emitted from steel production and one thirtieth of the CO<sub>2</sub> emitted from aluminum production.

When such lumber is combusted, 20 percent of the lumber emits CO<sub>2</sub>, while its remaining 80 percent is carbonized and fixed.

We have successfully developed technology to convert plant resources into their **fire retardant counterparts which have the abovementioned characteristics, as well as corrosion resistance, insect/termite resistance, an antibacterial effect and recyclability**.

The culture that embraces fire-retardant plant resources to which we are referring is one where, by putting this technology to good use, we can protect local industries, traditional culture, lives and property in our country, while enjoying the resultant beautiful forests, clean water and air. We would like to convey from Japan, a country known for wood, to the world the message about the excellence of a society that is safer, **in better harmony with nature, and which has more comfortable materials**.

We collectively call this concept “**CELL+FUNEN**” and will practice it.

# What is CELL+FUNEN?



Asano Fire-Retardant Lumber Co.,Ltd.

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We have developed our proprietary technology to convert plant resources into their fire retardant counterparts, and named this technology “CELL+FUNEN” after the “cellulose” of plants and “funen,” which means “fire retardant” in Japanese. We use “CELL+FUNEN” as the brand name for our fire retardant environment projects.

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Through this “CELL+FUNEN” concept, we will help modern people, who now live in an environment isolated from nature, return to the original natural environment, and in this way we will contribute to the establishment of a recycling-oriented society, which can heal the wounded earth.

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## Social evaluation — Selected for the Japanesque Modern Collection

The Japanesque Modern Committee (Board Chair: Mr. Kunio Nakamura, Chairman of Matsushita Electric Industrial Co., Ltd.) selects the excellent Japanese brands that can be boasted to the world for the collection.

The Ministry of Economy, Trade and Industry, the Ministry of Foreign Affairs of Japan, the Ministry of Land, Infrastructure, Transport and Tourism, and the Agency for Cultural Affairs support the committee as observers.

## Awarded the 2003 Nikkei BP Technology Award for Construction Division

For recognition as an outstanding technology that has a large impact on the industry and society.

(Other award winners in the same year included fuel cell cars from Toyota and Honda, system-LCD from Sharp and LED from Nichia.)

## Exploration of new words

Yahoo! dictionary and livedoor dictionary have added “funen mokuzai” (fire retardant lumber) to their respective lists of new words with the explanation that our company developed the technology.

## Awarded the Forestry Agency Director-General’s Award and Fukui Prefecture Science and Technology Encouragement Award

## Main patents and know-how — Fire retardant liquid, Fire retardant lumber produced using this liquid, etc.

Japan, the United States, China, South Korea, New Zealand, the United Kingdom, Finland, Germany, Spain, Austria, Sweden, France, the Netherlands, Italy, Canada, etc.

## Major certifications — Certified as “non-combustible material” by the Minister of Land, Infrastructure, Transport and Tourism—the first of its kind for lumber in Japan Certified as “non-combustible” by the Japan Railway Rollingstock & Machinery Association—the first of its kind for lumber in Japan

# CELL+FUNEN Materials and Major Sites Where They Have been Adopted



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## CELL+FUNEN fire retardant lumber

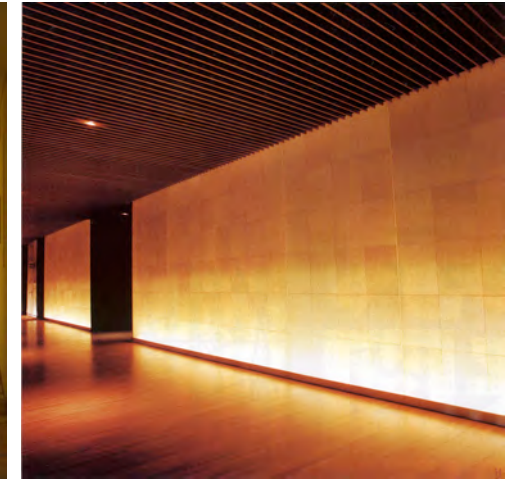
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The North Face shop in the Mitsukoshi Department Store

## CELL+FUNEN fire retardant paper



Umeko no le dining bar in Tenjin, Fukuoka    Suntory Museum of Art at Tokyo Midtown

## CELL+FUNEN fire retardant fabric

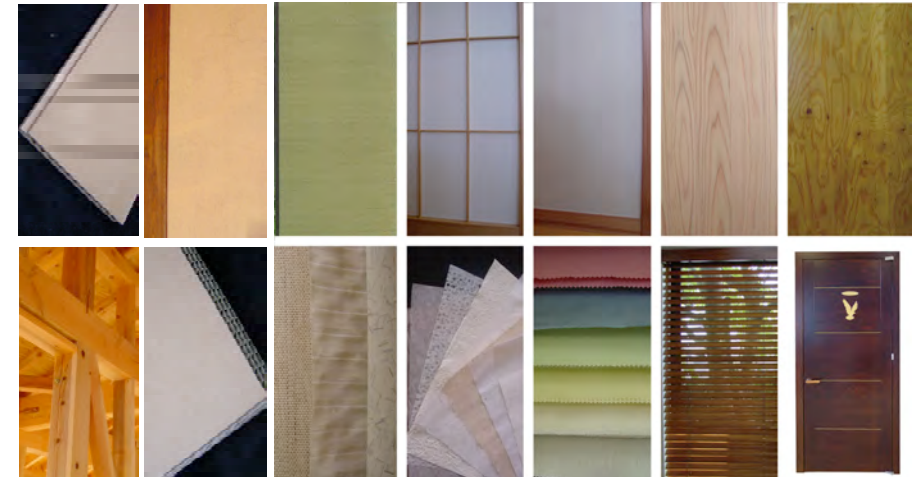
Velvet curtain



M Art Museum in Roppongi (scheduled)    Chantecler jewelry shop in The Peninsula Tokyo

## Main CELL+FUNEN fire retardant products

Artificial lumber    Plastered wall    Tatami    Sliding screen    Sliding door    Lumber    Plywood, LVLL



Furring    Corrugated board    Cloth    Paper    Natural fabric    Blind    Fireproof door  
Structural material    Curtain, Sheet

# Potentialities of New Materials = CELL+FUNEN



Asano Fire-Retardant Lumber Co.,Ltd.

- Materials involved in research and development for possible conversion into their fire retardant counterparts

Fossil, mineral resource materials (sponge, synthetic fiber, electric cable, PVC, etc.)

- Fire retardant lumber

Construction materials (interior materials, exterior materials, structural materials, furring)  
 Disaster prevention related materials (fireproof doors, fireproof sections)  
 Transportation related materials (subway, vehicle, ship facilities, etc.)  
 Other



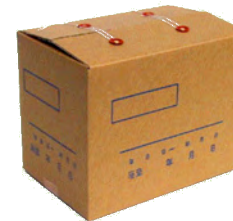
- Fire retardant wood powder

Freely formable, which allows the creation of new-type lumber (as substitutes for molded plastic used in home appliances, etc.)  
 CELL+FUNEN sash (as substitutes for aluminum and resin sash)  
 Other materials (as substitutes for concrete, brick, etc.)



- Fire retardant paper (mostly obtained by post-treatment process)

Construction materials (wallpaper, partition walls, etc.)  
 Furniture, lighting (furniture core materials, lampshades, etc.)  
 Packaging materials, etc. (corrugated board, etc.)  
 Forming materials (as substitutes for plastic, aluminum and steel products)  
 Other

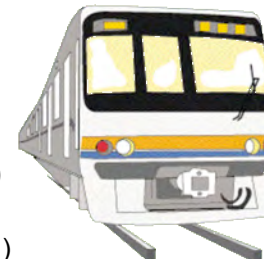


- Fire retardant textile (mostly obtained by post-treatment process)

Construction materials (wall cloths, etc.)  
 Materials for transportation (railroad, aviation, automobile and ship facilities, etc.)  
 Natural fabric  
 Other

- Fire retardant treated materials (mostly obtained by post-treatment process)

Construction materials (fixtures, tatami, interior accessory materials, interior materials, exterior materials, structural materials, furring, etc.)



# CELL+FUNEN Projects



Asano Fire-Retardant Lumber Co.,Ltd.

We will establish relationships of trust with companies and people having sympathy for our concept of “converting human and environment-friendly plants into their fire retardant counterparts with strict quality control standards (CELL+FUNEN) to contribute to the realization of a sustainable recycling-oriented society” through R&D and other activities, and promote the fact that “the prosperity of the companies using fire retardant technology means the growth of the CELL+FUNEN projects”, especially with those desiring to:

**A - Obtain licenses to use the patent of CELL+FUNEN lumber.** (After confirmation at the first step, proceed to the second step by negotiation and agreement.)

First step

Patent licensing contract for each product  
(concessions, royalties, display of CELL+FUNEN)  
Agreement on the scope of license granted, etc.

Second step

Prototype—charged  
Confidentiality contract  
Fire retardant material manufacturing equipment sales contract  
Fire retardant liquid supply contract

**B - Enter into a licensing contract to manufacture and distribute CELL+FUNEN lumber.** (After confirmation at the first step, proceed to the second step by negotiation and agreement.)

First step

Confirmation of fire retardancy of the product  
Prototype—charged  
Confidentiality contract

Second step

Patent licensing contract for each product (concessions, royalties, display of CELL+FUNEN)  
Agreement on the scope of license granted, etc.  
Fire retardant material manufacturing equipment sales contract  
Fire retardant liquid supply contract

**C - Purchase and distribute CELL+FUNEN lumber.**

Agreement on the scope of products covered  
Agreement on the territory of product distribution, etc.  
Confidentiality contract  
Sales contract

**D - Subcontract the fire retardant treatment of lumber for conversion into CELL+FUNEN**

Agreement on the scope of products covered  
Prototype—charged  
Confidentiality contract  
Fire retardant treatment subcontract agreement

**E - Obtain license to manufacture and distribute CELL+FUNEN fire retardant liquid.**

Licensing contract to manufacture and distribute fire retardant liquid  
(equity participation plan, concessions, royalties, display of CELL+FUNEN)  
Agreement on the scope of license granted, etc.  
Confidentiality contract  
Fire retardant liquid manufacturing equipment sales contract

## Contact information

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Exclusively distributed by:

Solely responsible for:  
Distribution of fire retardant materials;  
Distribution of fire retardant treated products; and  
Provision of fire retardancy-related contract brokerage services

**Fukui Funen Co., Ltd.**

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