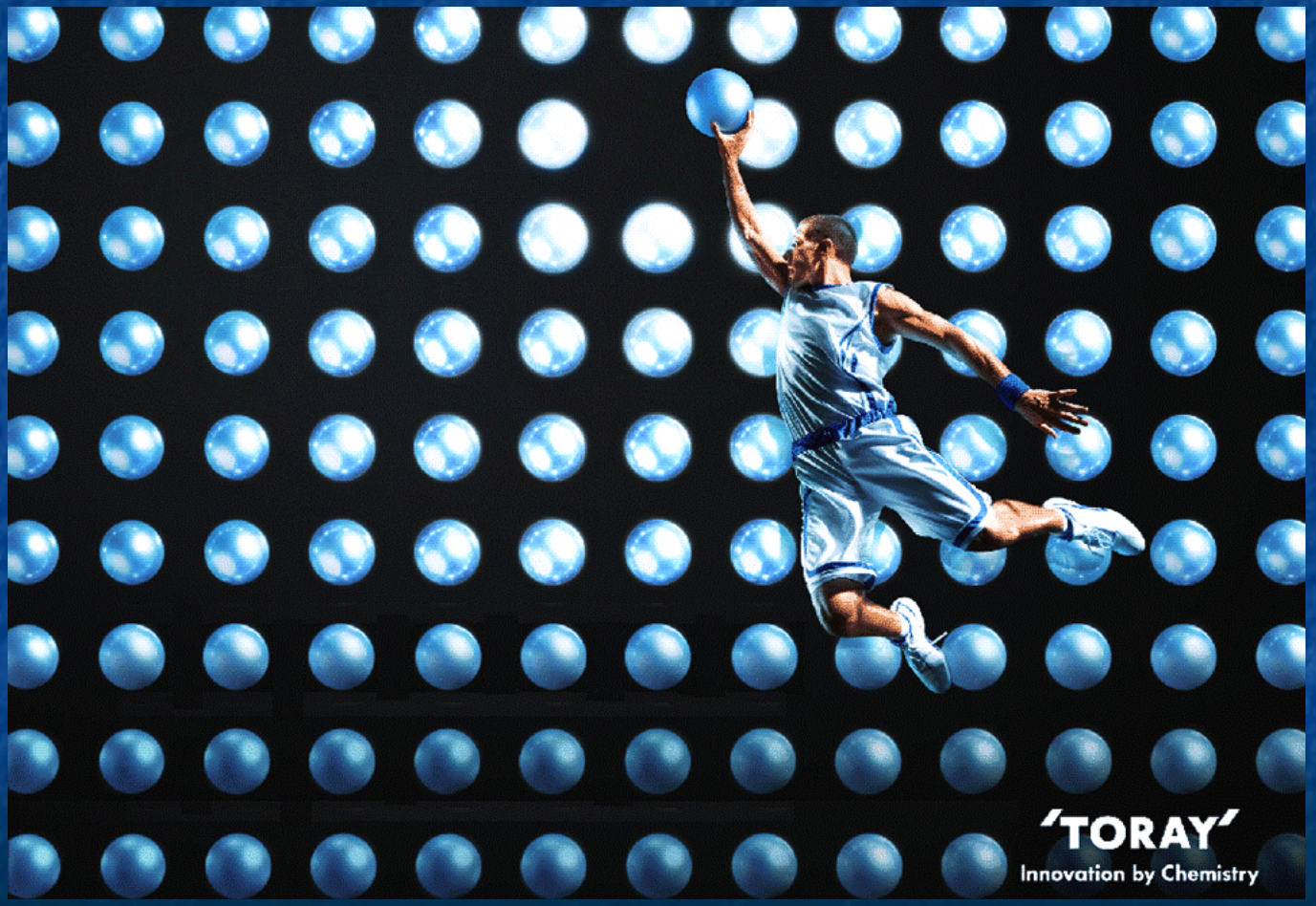
Then, How Toray will achieve?



Toray Nanotech Television Commercial (on the air in Japan from October 2007)

Strategic Approach:

How we contribute for sustainability?

One of criteria: Reduction of GHG

Approach to reduction of GHG・・・

(GHG：Green House Gas)

Global Warming

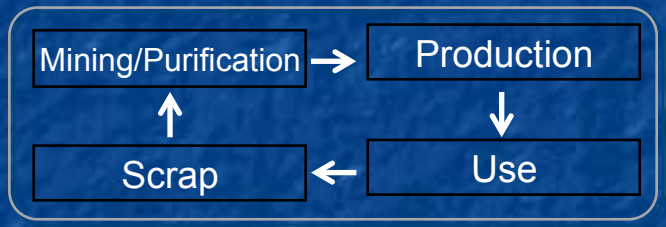
Extreme Climate

Increase of GHG
・Spending of Fossil Fuel
・Forest Destruction etc.

・Security of Food, Water, & Energy
・Mitigating and Reconstructing against Natural Disasters

Reduction of CO_2 based on Carbon-Balance*

* Amount of CO2 emitted over the full life cycle of a product



Contribution to reduction of GHG
at Mining/Purification, Production, Use and Scrap

What we have to see:
Globally Sustainable, Sound Material-Cycle Society
(harmonizing environmental protection and economic growth)

Sustainability: How Toray resolve?

Toray group's philosophy:
Contributing to society through the creation of new value with Innovative ideas, Technologies, and Products

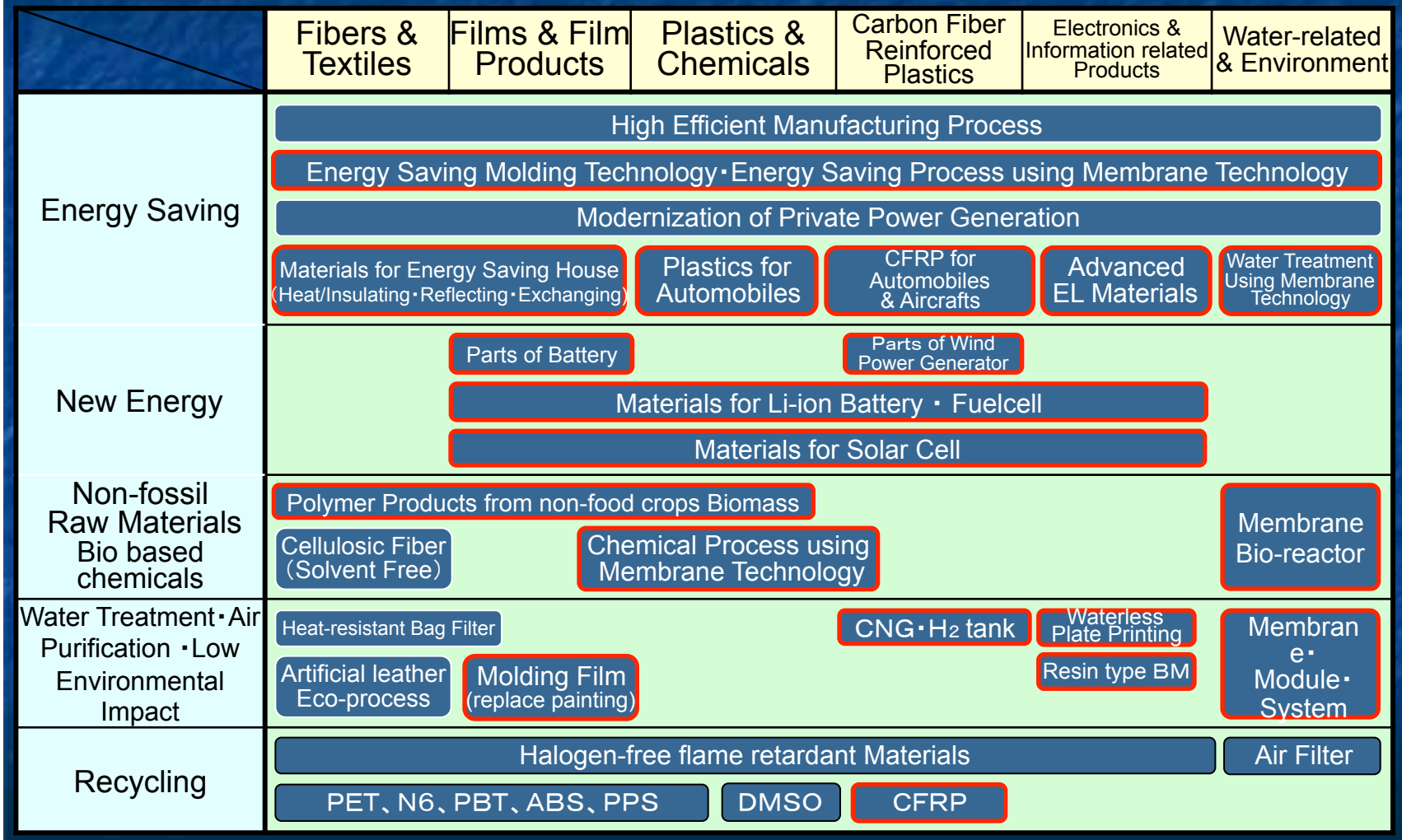
↓

Toray seriously focuses on technology based contribution.

Viewpoints

- Energy Saving・New Energy
- Non-fossil Raw Materials
- Water Treatment・Air Purification ・Low Environmental Impact
- Recycling

Project called as “Eco-Challenge”



The Third Three-Year Environmental Plan

Technical innovations:

Toray's positioning in Value Chain

-Both of seeds oriented and market oriented

-Long term perspective

-Examples in Sustainable society

Toray's positioning in supply chain

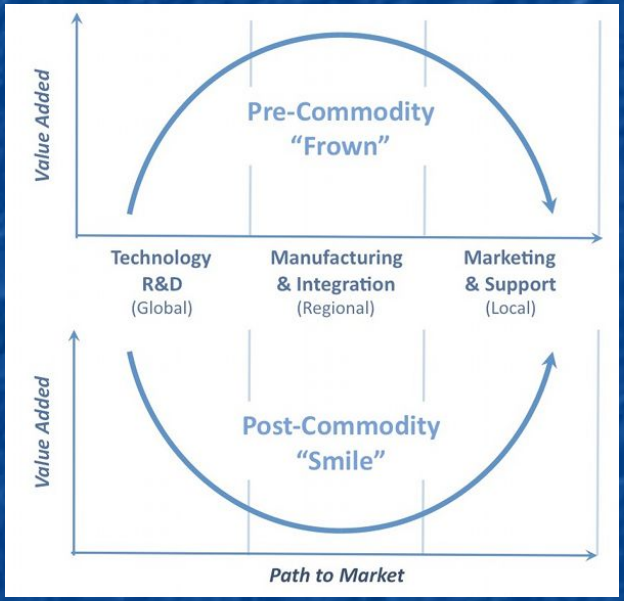
Chemical materials value chain

Reality: Toray is located at Intermediate-Downstream sector

Toray's positioning in supply chain

Intermediate positioning is hard to maintain business

Material science
Manufacturing expertise
Capability/Scalability
Technology oriented
How can we discover "Exciting topics"?
Long term



Acer founder Stan Shih's "Smile Curve"

Economics
Market requirements
Tangible subjects
Intangible subjects
How can we keep Earth "Green/Clean" ?
Short term

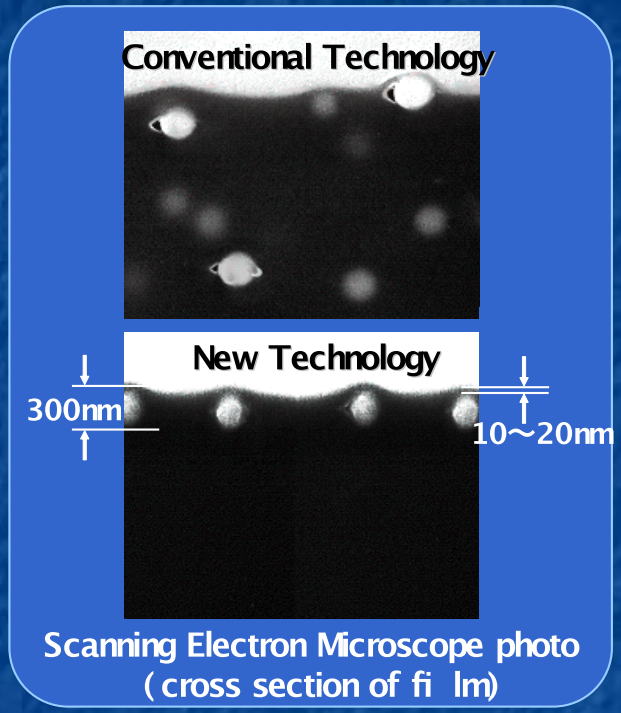
"Sustainability" is difficult keyword for most of materials providers

Toray's DNA: Both pathways

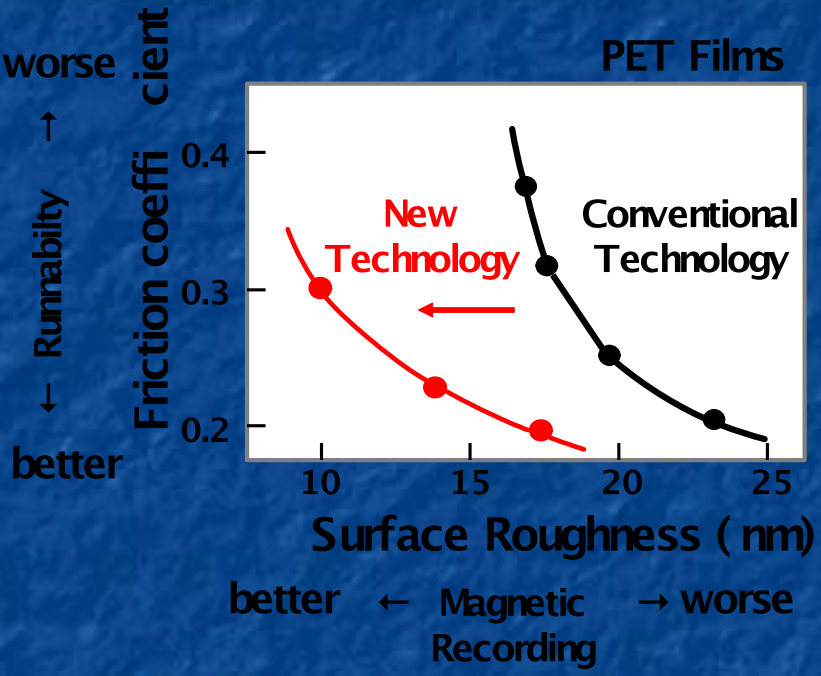
1. Design Oriented Nanotechnology (Needs Oriented)

2. Discovery Oriented Nanotechnology (Seeds oriented)

Example of Needs oriented

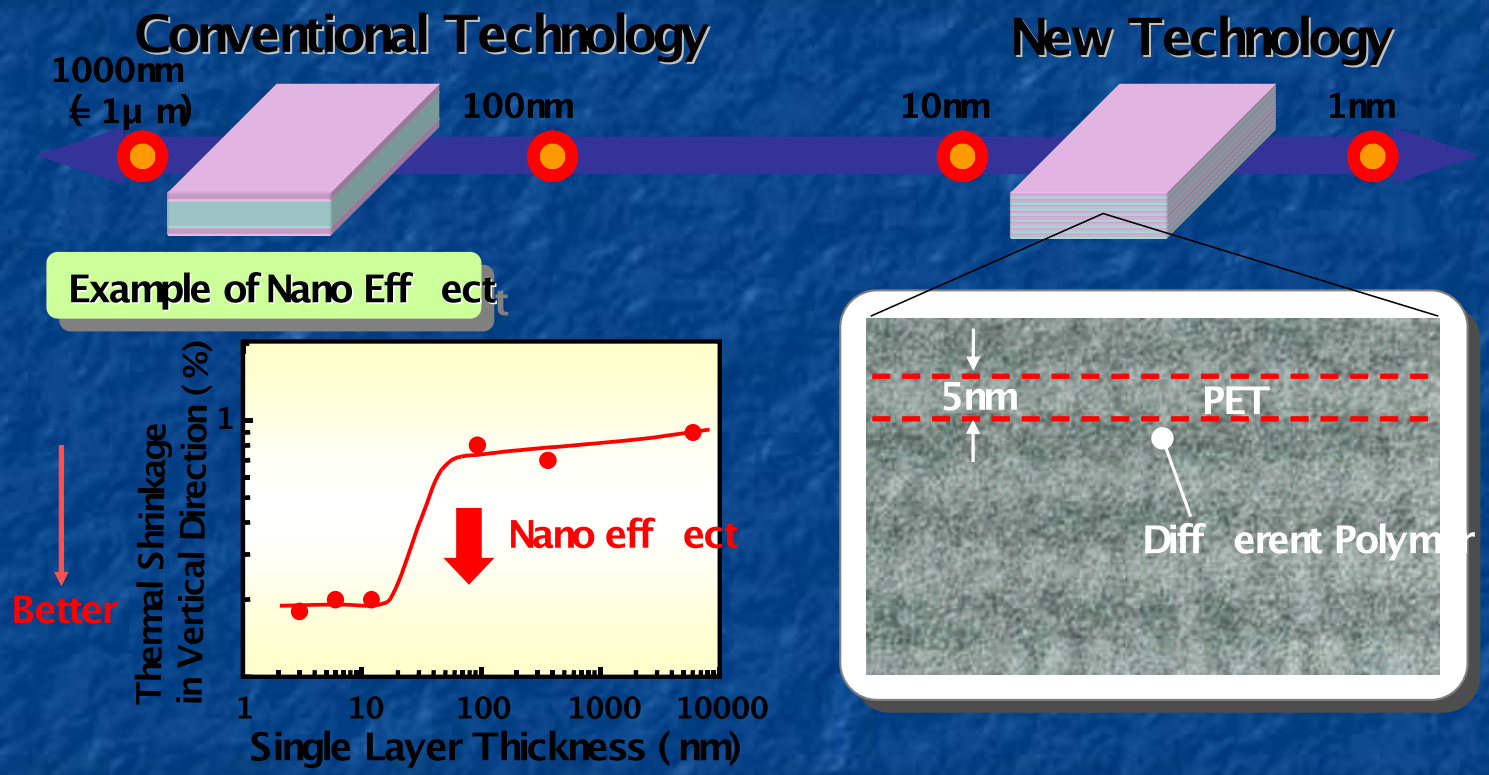


Scanning Electron Microscope photo
(cross section of fi lm)



★ Overcome the“ Dilemma” between Runnability and Magnetic recording
★ Control the height of surface protrusion of PET fi lm in 10 to 20 nm
★ In market as Toray’s standard PET fi lms in the world since 1992

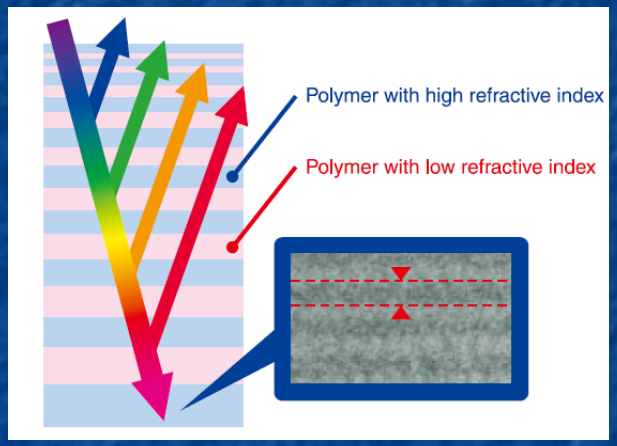
Example of Discovery oriented(1)

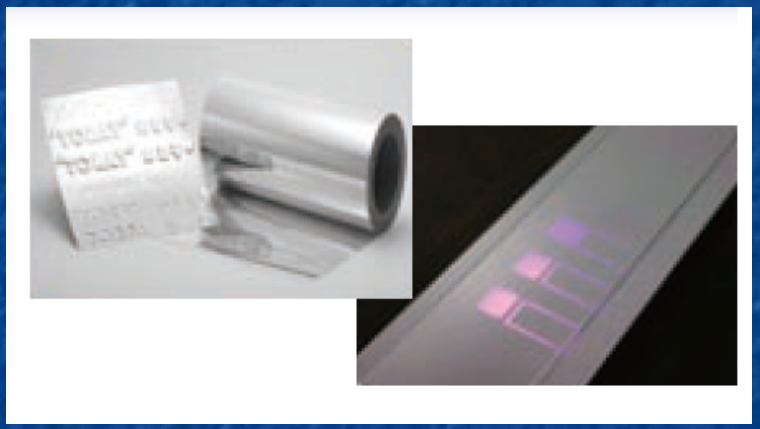


★ Discovered "Nano Effects" in some properties by pursuing thin layered films.
★ Created new film process to reduce thickness of one layer to ~10 nm.
★ Developing new products in which "Nano Effects" show significant advantage.

Example of Discovery oriented(2)

Nano scale multi layer structure makes another optical property
- Metallic color without any metals





Nano structured film achieved new features.
1. Environmental friendly: No metal plating, no metal coating
2. High Electromagnetic wave transmission: good opportunity for wireless applications
3. Easy formability: free from cracking and blanching
4. Stability: No corrosion