

The advantage of this material compared to traditional photocatalytic materials is that it has a narrow band gap, reduced activation energy and the ability to fragment organic compounds. Modifying materials of natural origin to enhance photocatalytic efficiency, durability and environmental friendliness is a future trend.



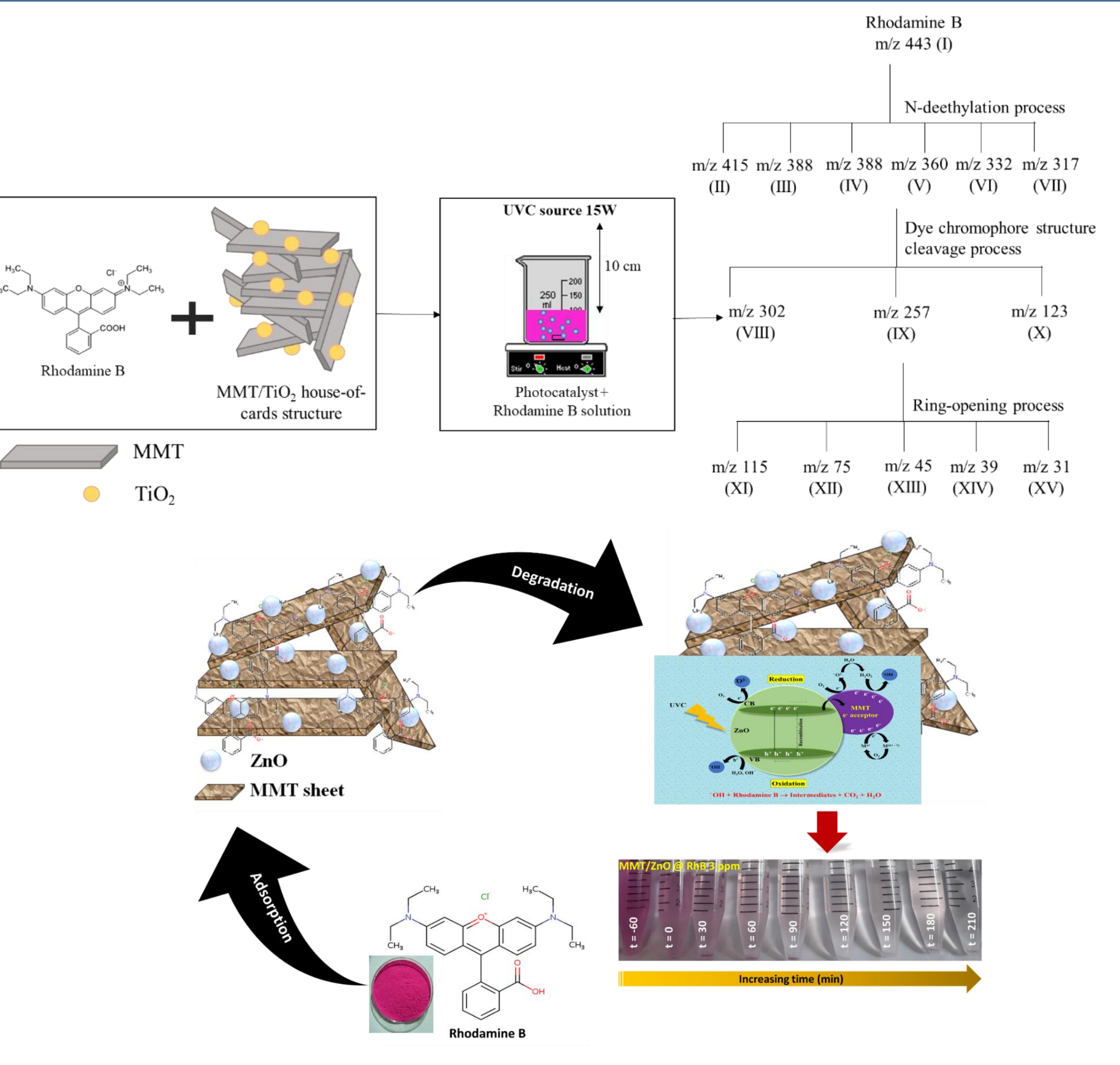
ĐẠI HỌC QUỐC GIA THÀNH PHỐ HỒ CHÍ MINH  
**ĐẠI HỌC KHOA HỌC TỰ NHIÊN**  
**KHOA KHOA HỌC & CÔNG NGHỆ VẬT LIỆU**  
**PHÒNG THÍ NGHIỆM CƠ SỞ**  
**KHOA HỌC VẬT LIỆU**



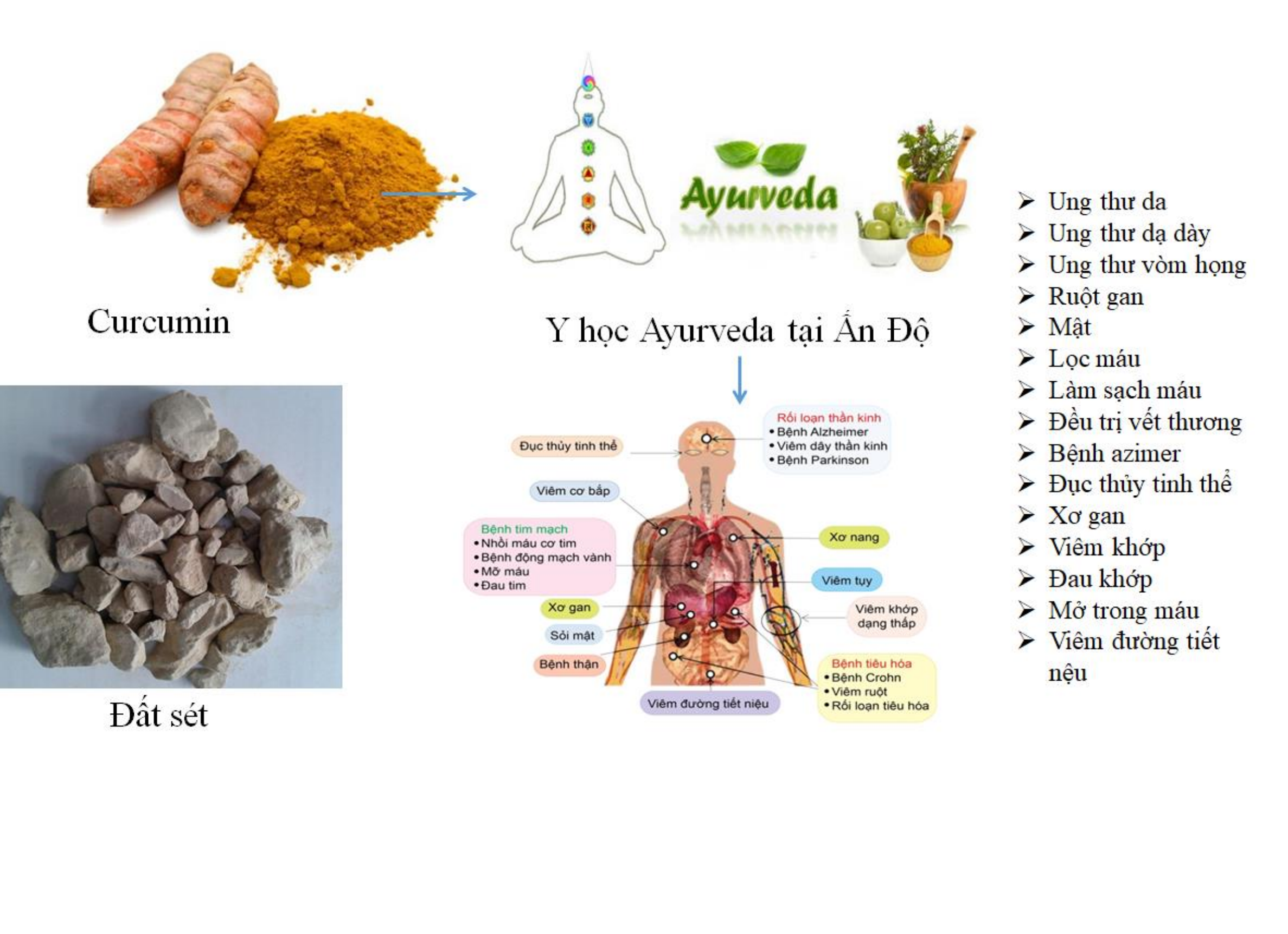
Life is everything including Science; Science is nothing without Materials

Research Group	Ceramic	Composites	Electronic Materials	Material Processing	Energy	Health & Medicine	Environment	Metals	Polymers	Sustainability	Nano Materials
 Vật liệu quang xúc tác Vật liệu hấp phụ M.Sc. Đào Thị Băng Tâm	●	●	●	●					●	●	●
 Công nghệ nano và nanocomposite M.Sc. Lê Hồn Nhiên			●	●		●			●	●	●
 Hợp chất curcumin Vật liệu trở nhớ M.Sc. Nguyễn Trung Độ	●		●	●				●	●	●	●
 Polymers-Composites Polymer sinh học Assoc. Prof. Dr. Hà Thúc Chí Nhân			●	●		●	●	●	●	●	●

**Photocatalytic materials:** A type of material with photochemical activity, high durability, environmental friendliness, and economic efficiency. The advantage of this material is that it has a narrow band gap, reduced activation energy, and the ability to fragment organic compounds. Modifying materials of natural origin to enhance photocatalytic efficiency, durability, and environmental friendliness is a future trend.



**Functional nanomaterials applied in medicine and pharmacy:** Curcumin is a traditional medicine known for its anti-inflammatory and antioxidant properties. Extracting Curcumin from Vietnamese turmeric root using ethanol and distilled water solvent, Curcumin content was determined by high performance liquid chromatography method. Because Curcumin is not heat stable and is easily affected by factors in the body, a carrier material is needed to protect Curcumin activity. Montmorillonite (MMT) is a suitable conductive material due to its special properties such as cation exchange capacity and surface adsorption. FT-IR spectrum has identified the characteristic peaks of Curcumin. TGA has determined the heat stability of Curcumin due to the encapsulation of MMT.



**Biodegradable polymers:** Including biodegradable plastic products and materials. The product quickly decomposes when buried in soil. After that, the ingredients gradually biodegrade, causing no significant harm to the environment and ecosystem. *Plastic waste is considered a danger of the 21st century. Today, waste not only covers the land but also exists in the ocean. Huge plastic landfills with an area of up to 15 million square kilometers (larger than the United States) can exist for thousands of years, causing serious harm to living creatures. Laboratory of Fundamental Materials Science's biodegradable plastic products have been completed and are ready to be transferred to market development.*

