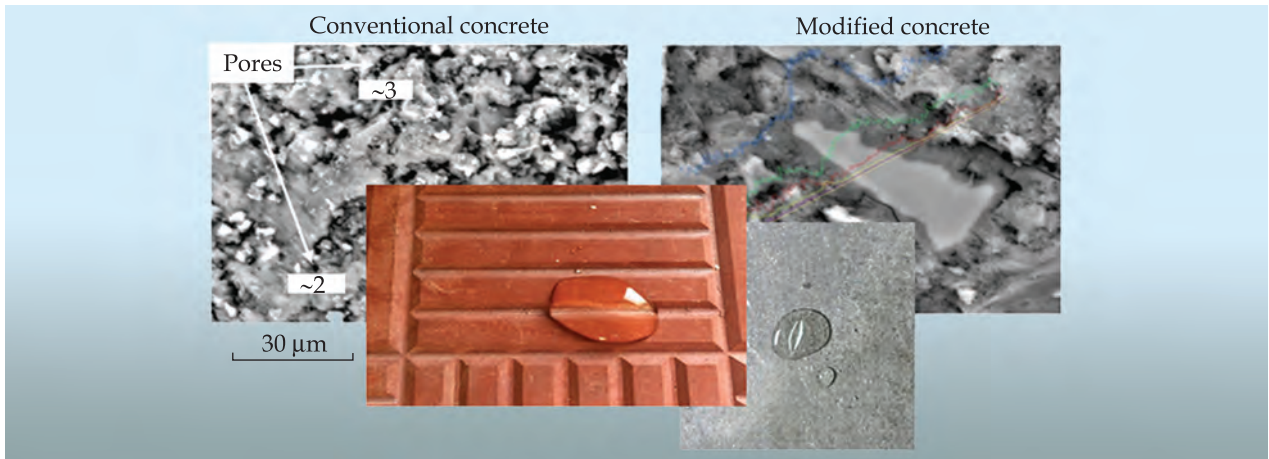


## TECHNOLOGY FOR RADIATION MODIFICATION OF COMPOSITE ORGANIC AND MINERAL CEMENT SYSTEMS



Effects of radiation modification of concrete and concrete products:  
the hydrophobicity test of modified products (corrugated fiber cement sheets, paving slabs)

### Areas of Application

This technology is designed to enhance water repellency, corrosion resistance, and durability of concrete structures and products made of asbestos concrete and other organic and mineral concrete systems used in extreme operating conditions

### Advantages

There are no analogs in Ukraine. The technology is notable for simplicity of processes and remote control of structuring in the very material mass; no hazardous substances are used; can apply both to the unfinished concrete products at any stage of manufacture and to the ready articles

### IPR Protection

IPR1

### Specification

As a result of radiation treatment, the porous construction materials are modified into dense hydrophobic composites with higher strength and corrosion resistance. The technology consists of introducing the modifying structures into the porous material mass and treating the material with electron beams in order to make it monolithic. The technology is based on the use of electron accelerators with average electron energy of 4–10 MeV; at a beam power of, at least, 5 kW, about 1.5 tons of concrete structures can be modified annually

### Stage of Development. Suggestions for Commercialization

IRL6, TRL6  
Technology, mass production line design

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