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## Bioethanol Production from Food and Agricultural Waste and its Applications

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The global economic growth has led to high energy consumption, mainly from fossil fuels. The extensive use of fossil fuels has made impossible to treat the emitted carbon dioxide in a natural way. One of the ways to cope with this global problem is to close the carbon cycle in nature by the use of renewable biofuels and consumption the resulting carbon by photosynthesis.

The use of ethanol produced from natural and renewable resources is a good alternative but its feasibility depends on the raw materials, their availability, price and environmental safety. Therefore, the so-called second generation raw materials (i.e. cellulose, food and agricultural waste) are currently tested.

In the present work experimental data for the use of some waste (food waste, processed cereals) for fermentative ethanol production are presented.

Some practical applications for ethanol production and ethanol dehydration process are demonstrated.

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### Biography

Venko Beschkov, PhD, DSc was born in 1946 in Sofia, Bulgaria. He has got his PhD in 1978 and his DSc degree in 1996 in the Bulgarian Academy of Sciences. His present interests are chemical and biochemical processes for environment protection and for utilization of renewable energy sources. He participates in 30 scientific projects, supported by different sources, as well as in 18 applied projects. The last project he was working on is HYDROGEN PRODUCTION FROM BLACK SEA WATER BY SULFIDE-DRIVEN FUEL CELL, financed by the FP7, BS-ERA.NET Pilot Joint Call. He published over 190 scientific papers, 2 monographs and 6 chapters in selected issues. Over 1200 citations of his papers have been noted (h-index=20 G-index=32). He has been Head of the Institute of Chemical Engineering at the Bulgarian Academy of Sciences for 21 years (1993/2014) and deputy-minister of environment (1991/92).

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