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**FORMATION OF C2 COMPOUND IN THE  
BIOCHEMICAL DEGRADATION OF CELLULOSE:  
THE CASE OF ACETALDEHYDE**

Cellulose, hemicellulose and lignin are supporting the strong structural resistance of plants. The common cellulose is derived from D-glucose units forming a linear polymer. The microfibrils formed by such chains can be broken down by cellulases into mono-saccharides. Among these monosaccharides glucose units could be fermented. Mainly ethanol could be produced. In the presence of oxygen it might turn into acetaldehyde.

In our detailed studies we investigated the reactions of acetaldehyde on surfaces. Its main products are carbon monoxide and methane. In the adsorbed layer the oligomerization took place too. This might be important for further application. The monomer is liquid while paraldehyde is a solid and easily stored. For energetic purposes both could be used.

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