

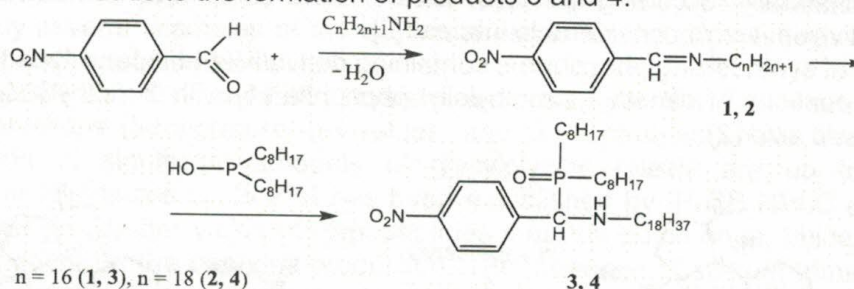
Synthesis and structure of novel phosphorylated azomethines

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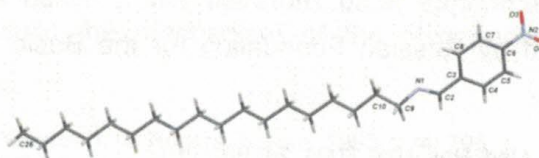
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Azomethines and their phosphorylated products with aliphatic long-chain, due to their unique reactivity, are important in the construction of various multifunctional compounds with a broad spectrum of biological activity. The amination of 4-nitrobenzaldehyde with long-chain aliphatic amines gave products of condensation – azomethines 1 and 2. Heating these compounds leads to the formation of products 3 and 4.



The structure of the isolated compounds was determined by IR and NMR spectroscopy, elemental and X-ray analysis; their thermal stability was studied by simultaneous thermogravimetry and differential scanning calorimetry. Newly synthesized compounds showed pronounced antibacterial and antifungal activity.

Figure 1. Molecular structure of azomethines 2 in crystal



In conclusion, azomethines 1, 2 and their phosphorylated derivatives 3, 4 were synthesized in good yield, characterized by different spectral studies and analyses, and their antimicrobial activity has been evaluated. Compounds 1-4 demonstrated good inhibitions against pathogenic bacteria and fungi.

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