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## Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713618290>

### NEW SEMISYNTHETIC CEPHALOSPORINS WITH ANTIBACTERIAL, ANTIVIRAL AND ANTIFUNGAL ACTIVITY

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**To cite this Article** Vitezić, Natalija, Merslavić, Marjo and Japelj, Miha (1979) 'NEW SEMISYNTHETIC CEPHALOSPORINS WITH ANTIBACTERIAL, ANTIVIRAL AND ANTIFUNGAL ACTIVITY', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 6: 1, 321

**To link to this Article:** DOI: 10.1080/03086647908080434

**URL:** <http://dx.doi.org/10.1080/03086647908080434>

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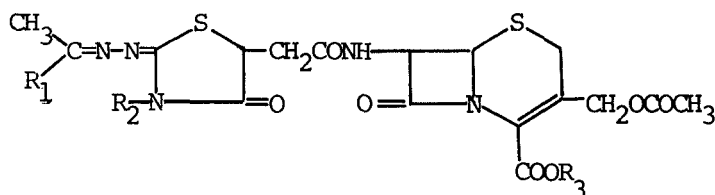
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# NEW SEMISYNTHETIC CEPHALOSPORINS WITH ANTIBACTERIAL, ANTIVIRAL AND ANTIFUNGAL ACTIVITY

Natalija Vitezić, Marjo Merslavič and Miha Japelj

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The synthesis of new derivatives of thiazolidine 2-alkylidene-4-on-5-acetamidocephalosporanic acids or thiazolidine 2-arylidenazino-4-on-5-acetamidocephalosporanic acids and their salts of general formula (I) has been achieved.



(I)

$R_1 = \text{CH}_3, \text{C}_2\text{H}_5, \text{C}_4\text{H}_9, \text{C}_6\text{H}_5$

$R_2 = \text{H}, \text{C}_6\text{H}_5, \text{CH}_3\text{C}_6\text{H}_4$

$R_3 = \text{H}, \text{Na}, \text{K}$

Synthesis of new semisynthetic cephalosporins was performed using the mixed anhydride, acid chloride and carbodiimide methods. The mixed anhydride method has given the best results regarding yields and purity. The structure of the new compounds has been established by elementary analysis, NMR spectrometry and TLC.

Some of these compounds showed broad antibacterial, antiviral and antifungal activity.