Thesis Title	Synthesis of 9′,10′-Dihydro-5-tetrahydropyranyloxy-spiro [3-cyclopenten-1,11′-(9,10)-ethanoanthracene] -2- one : A Precursor Approach to (±) - Pentenomycin I and (±)-Epipentenomycin I
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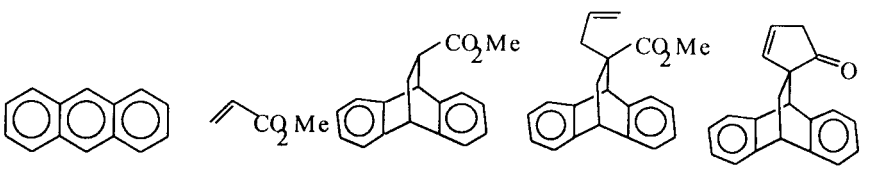
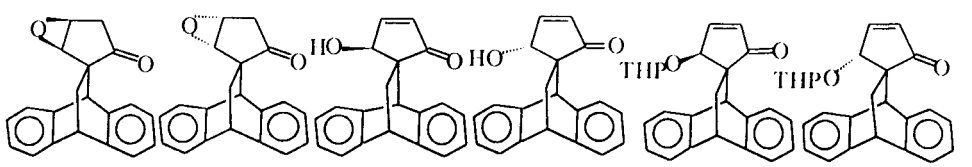
ABSTRACT

The synthesis of 9′,10′–dihydro- 5 – tetrahydropyranyloxy- spiro[3 -cyclopenten - 1, 11′-(9,10)- ethanoanthracene] - 2- one **15a** and **15b** from the reaction between anthracene **8** and methyl acrylate **9** via a Diels-Alder reaction yielded a monoester **10** . Alkylation of this monoester **10** with allyl bromide gave the allyl adduct **11** which was then cyclised to give the spiro ketone **12** . Epoxidation of **12** gave a mixture of the two isomers of the epoxide, **13a** and **13b**. After opening the epoxide rings of these two isomers, a mixture of the two isomers **14a** and **14b** was obtained. Finally, protection of the hydroxyl groups of **14a** and **14b** gave **15a** and **15b**.



8 **9** **10** **11** **12**



13a **13b** **14a** **14b** **15a** **15b**