Synthesis of 3-bromo-7H-benzo[de]naphthacene-7-one

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Condensation reactions using benzobenzoanthrones (BBzs) as a starting material have provided various types of undecacyclic aromatic hydrocarbons (UAHs) such as hexabenzo[*a, cd, f, j,lm,o*]perylene classified into the 4,5-TBP (tetrabenzo[*a, cd, j, lm*]perylene) type and trinaphtho[2,1,8-*uva*:2,3-*c*: 2',1',8'-*fgh*]pentacene classified into 9,10-TBP type. In the present study, we aimed to synthesize a new UAH, benzo[*vwx*]naphthapheno[2,3-*a*:8',1',2'-*cde*] hexaphene, which is classified into a 9,10-VEB (violanthrene B) type and prepared its starting material, 3-bromo-9,10-BBz. The bromination of 9,10-BBz was performed with bromine in acetic acid; bromine was added to the solution at 353 K for 75 min and the mixture was stirred at 363 K for 5 h. The crude product was purified by means of vacuum evaporation and column chromatography and finally recrystallized from xylene, giving yellow powder. The structure of the purified product was confirmed by NMR measurements.