Workshop 26 Functional Group Interconversion with Tosylates

Although the syntheses below look simple—each just involves changing a functional group into a new one—they all require multiple steps, and tosylation is a useful method in each. Give a (multi-step) synthetic scheme that could be used to transform each starting material into product.

$$CH_3$$
 H CH_3 CH_3 CH_2 CH_2 CH_2 CH_2 CH_3 $CH_$

Hint: Use an alkynylsodium to provide the alkyl group.

$$CH_3$$
 CH_3