

Abstract Submitted  
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**Viscous fingering and channeling in chemical enhanced oil recovery**<sup>1</sup> PRABIR DARIPA, SOURAV DUTTA, Department of Mathematics, Texas AM University, College Station, TX-77843 — We have developed a hybrid numerical method based on discontinuous finite element method and modified method of characteristics to compute the multiphase multicomponent fluid flow in porous media in the context of chemical enhanced oil recovery. We use this method to study the effect of various chemical components on the viscous fingering and channeling in rectilinear and radial flow configurations. We will also discuss about the efficiency of various flooding schemes based on these understandings. Time permitting, we will discuss about the effect of variable injection rates in these practical setting.

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