

Необично однесување на површинско-активни редокс системи во електродни механизми поврзани со реверзибилна последователна хемиска реакција во услови на циклична скалеста волтаметрија

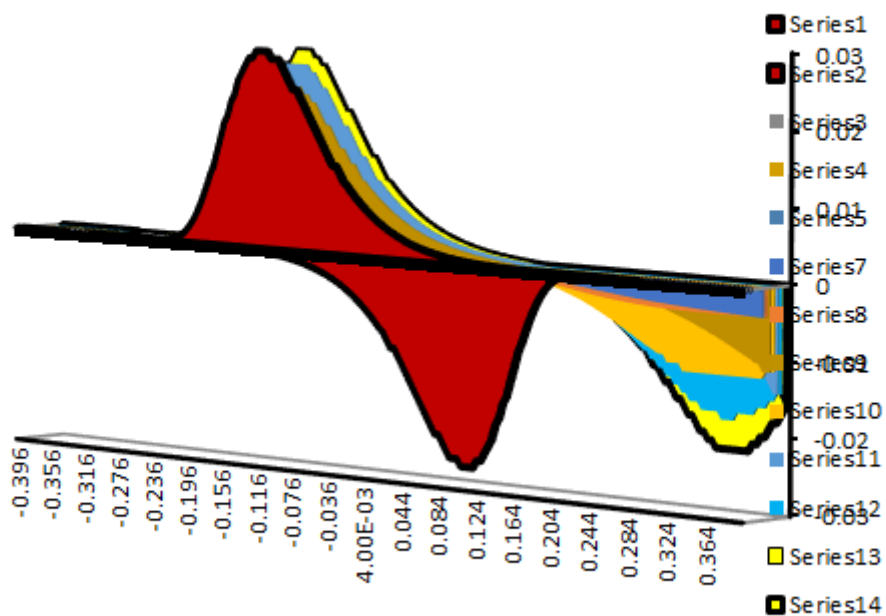
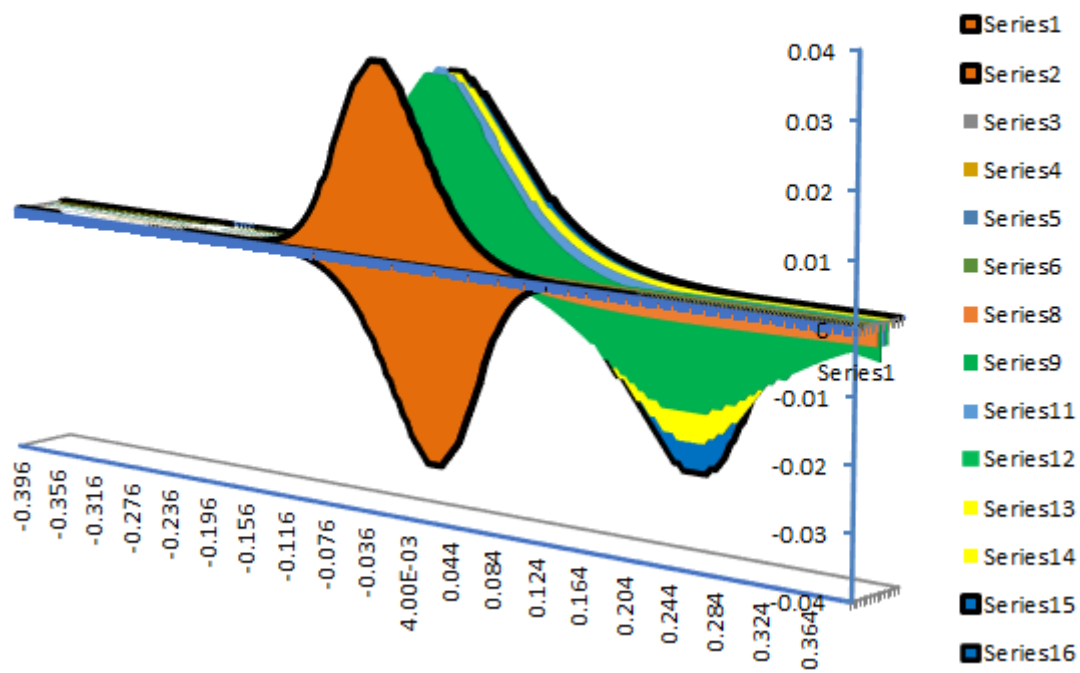
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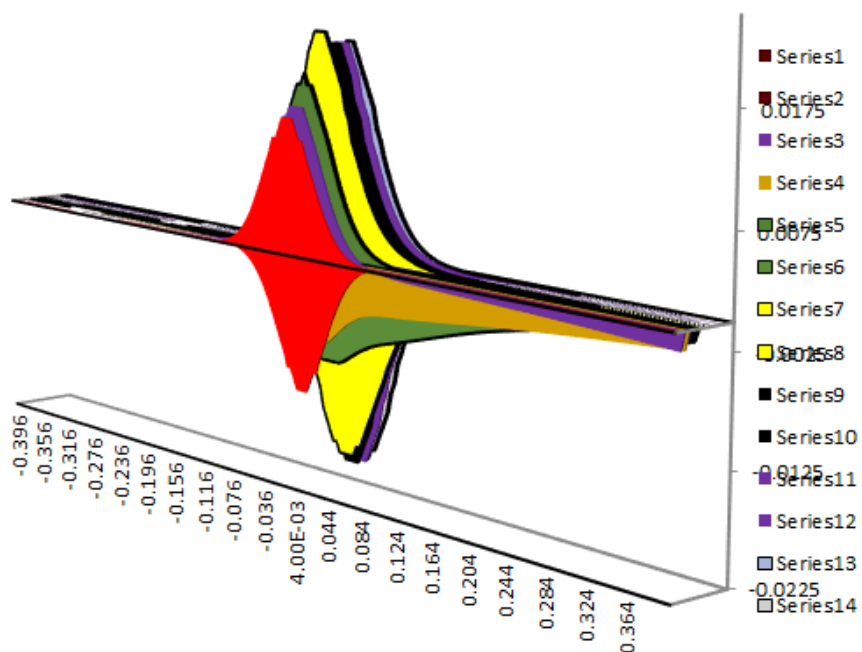
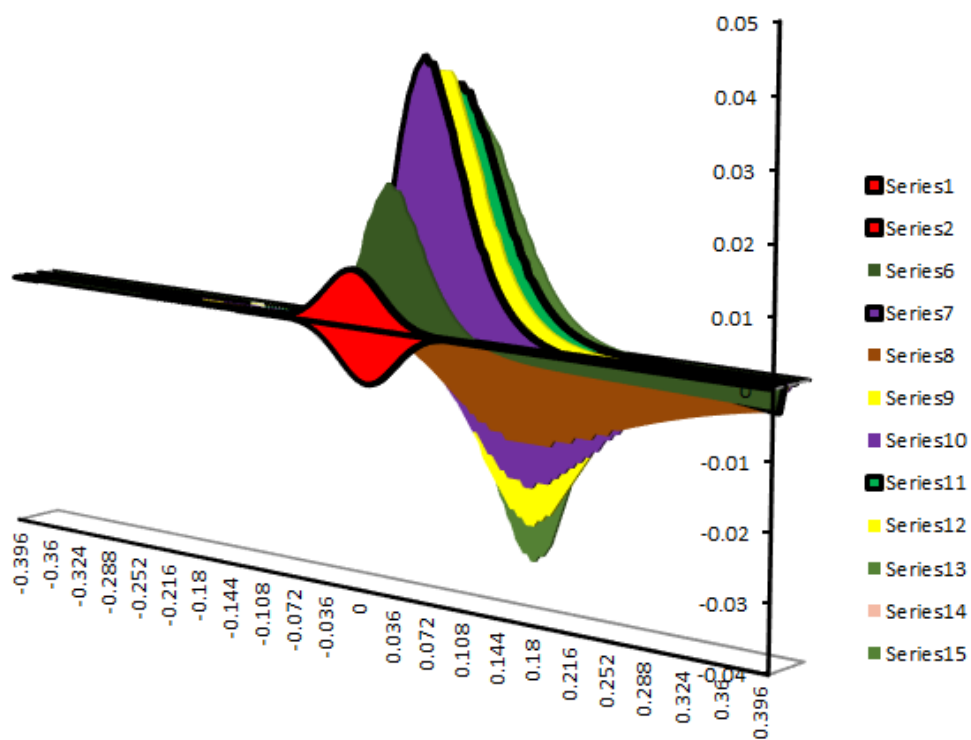
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Abstract

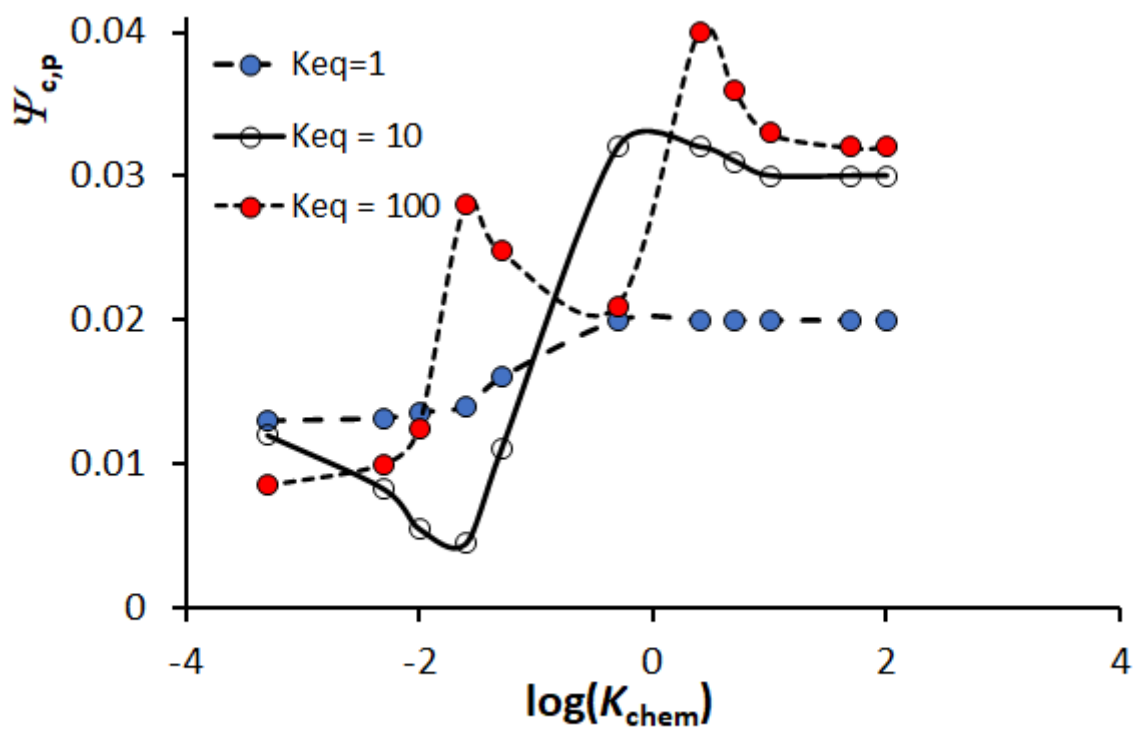
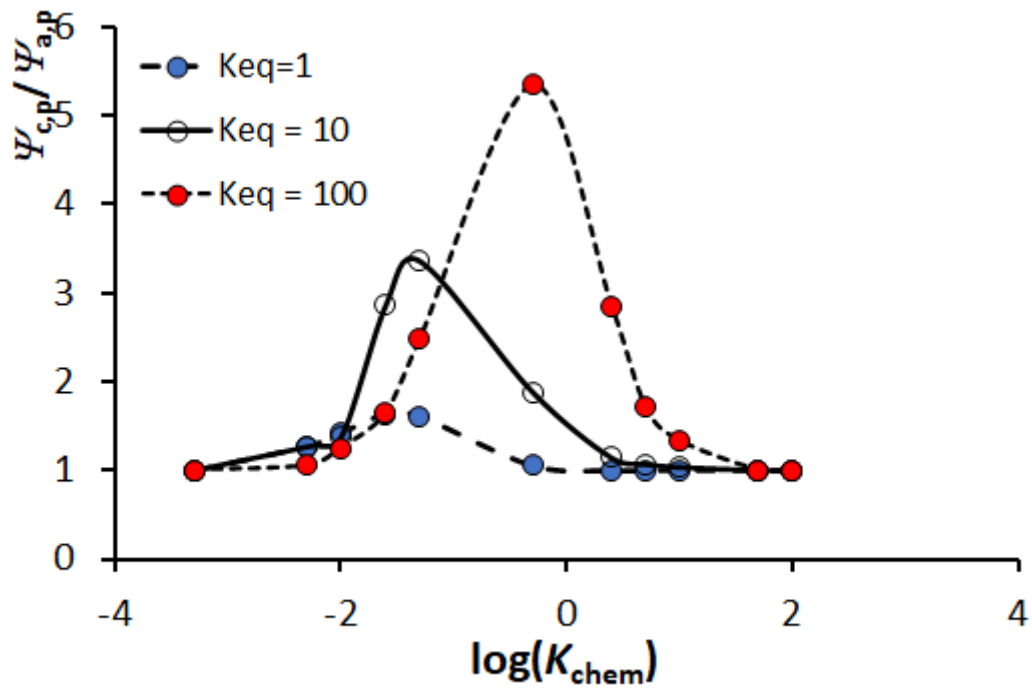
Површинско-активните редокс системи се едни од најважните во физиологијата и биохемијата на голем број на т.н. редокс-активни ензими и на физиолошки активни соединенија чиј оксидо-редукциски процес е проследен со последователна хемиска реакција. Од хемиските реакции што се поврзани со електрохемискиот чекор на редокс-активните системи, најважни се процесите на реверзибилна протонација, комплексирање или на инхибиција на ензимите. Неодамна, овој механизма беше теоретски студирани од нашата група во услови на квадратно-бранова волтаметрија, при што беа покажани голем број на необични, досега непознати својства кај ваквите системи. Студирањето на овој површински ECrev механизам во услови на циклична скалеста волтаметрија открива нови аспекти кај површинските редокс-активни системи чија електродна реакција е поврзана со последователна реверзибилна хемиска реакција. Посебно е интригантен сегментот во кој постои споредлива брзина на електродната реакција и на хемиската реакција при умерени и големи вредности на константата на рамнотежа на хемиската реакција. Резултатите од овие првични испитувања овозможуваат воспоставување на дијагностички критериуми и разработка на методи за мерење на релевантните кинетички и термодинамички параметри кај ваквите системи, што е особено важно во следење на интеракциите на лекови и во процесите на ензимската волтаметрија.

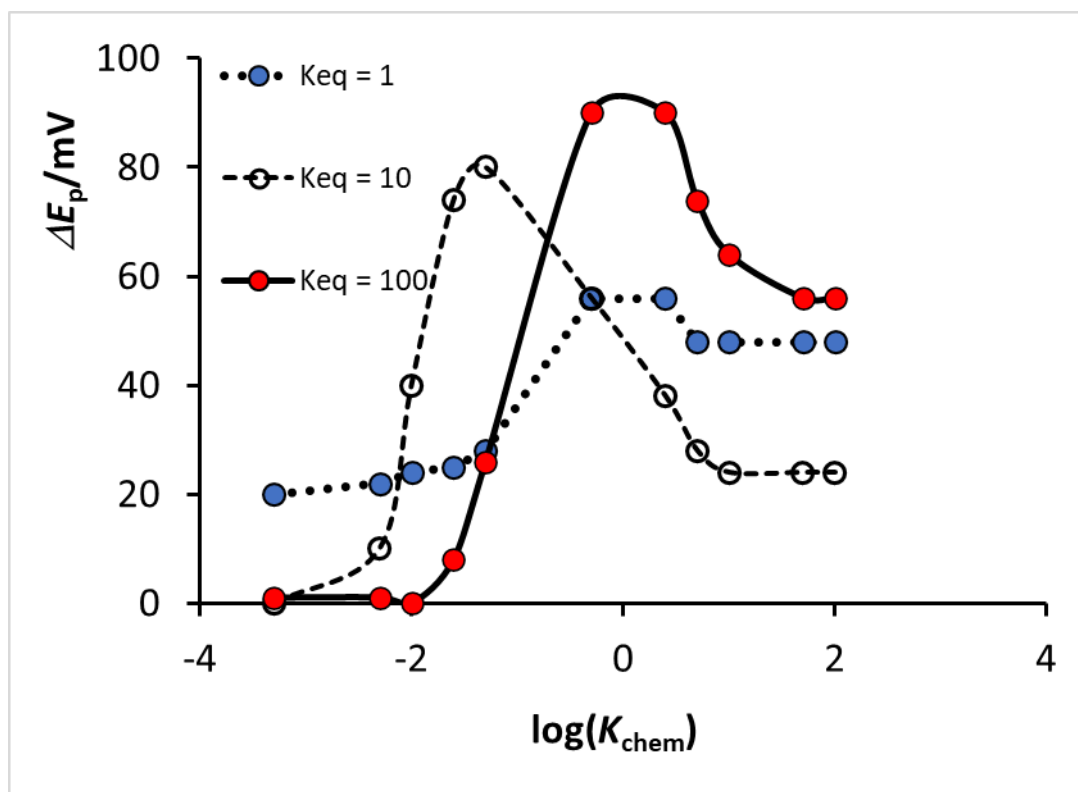


Влијание на брзината на хемиската реакција кај електродни реакции што се карактеризираат со мала брзина на пренос на електрони



Влијание на брзината на хемиската реакција кај електродни реакции што се карактеризираат со голема брзина на пренос на електрони





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