

## عنوان مقاله:

Analytical Solutions of Time Periodic Electroosmotic Flow in a Semicircular Microchannel

## محل انتشار:

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## خلاصه مقاله:

The time periodic electroosmotic flow of Newtonian fluids through a semicircular microchannel is studied under the Debye–Hückel approximation. Analytical series of solutions are found, and they consist of a time-dependent oscillating part and a time-dependent generating or transient part. Some new physical phenomena are found. The electroosmotic flow driven by an alternating electric field is not periodic in time, but quasi-periodic. There is a phase shift between voltage and flow, which is only dependent on the frequency of external electric field.

## کلمات کلیدی:

Electroosmotic flow, Integral transform, Newtonian fluid, Time periodic flow algorithm

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1385032>

