

Development of Environment-friendly High-efficiency Capillary Separation Analytical System

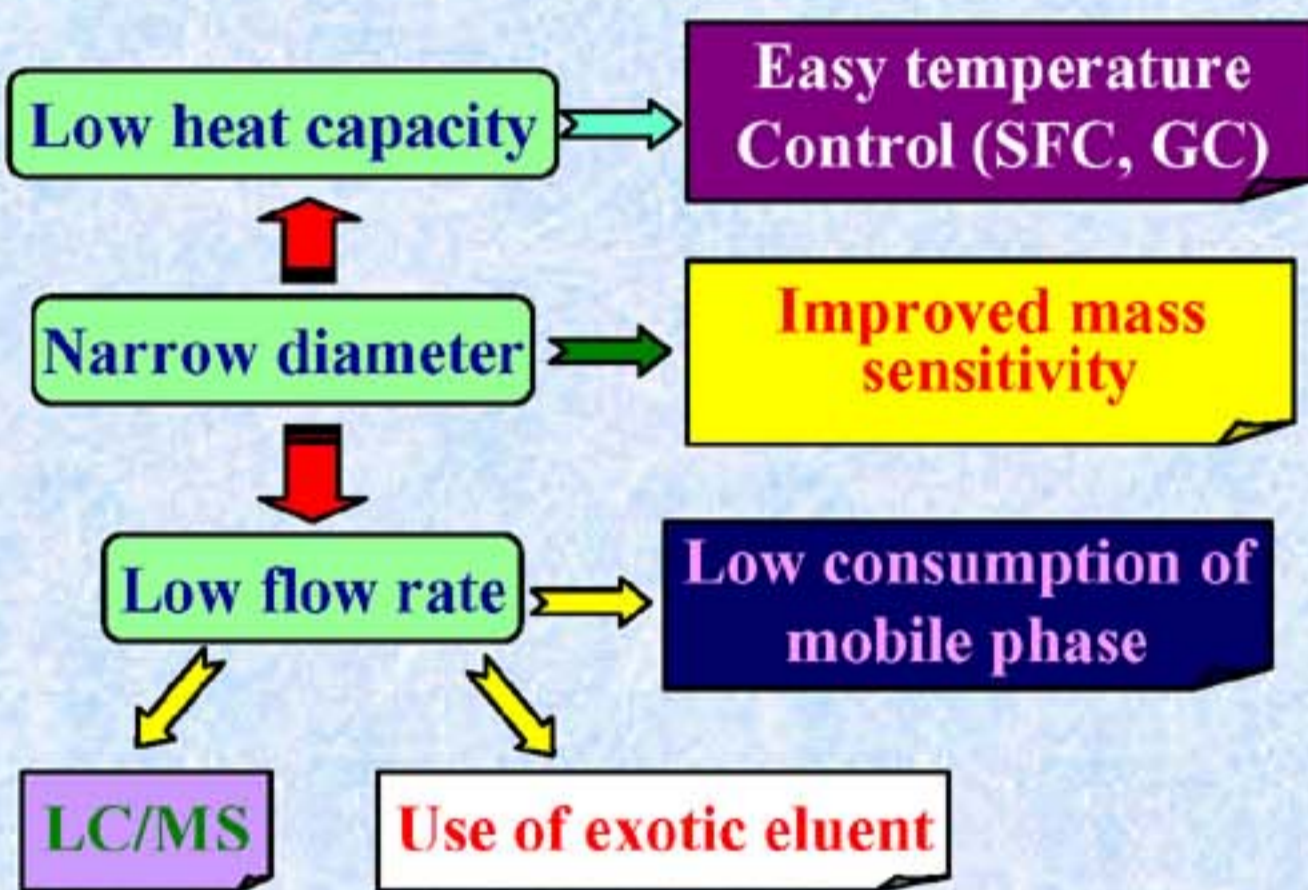
環境フレンドリー高性能キャピラリー分離計測システムの開発

Gifu University

Toyohide Takeuchi, Ji-Ye Jin
岐阜大学: 竹内豊英, 金 継業

<Background>

Although capillary column liquid chromatography (LC) has lots of advantages over conventional LC, it has never replaced conventional LC for the last quarter century. This is because miniaturization of conventional packed columns does not mean the increase in the column efficiency. In other words, the development of high-efficiency capillary columns will be able to become a trigger to shift conventional LC to capillary LC. Capillary LC saves solvents and it is quite friendly to the environment. Monolithic capillary columns have a potential to achieve much higher efficiency than conventional packed columns because of the unique pore structure. Drawbacks of conventional LC can be solved by downsizing of separation columns.

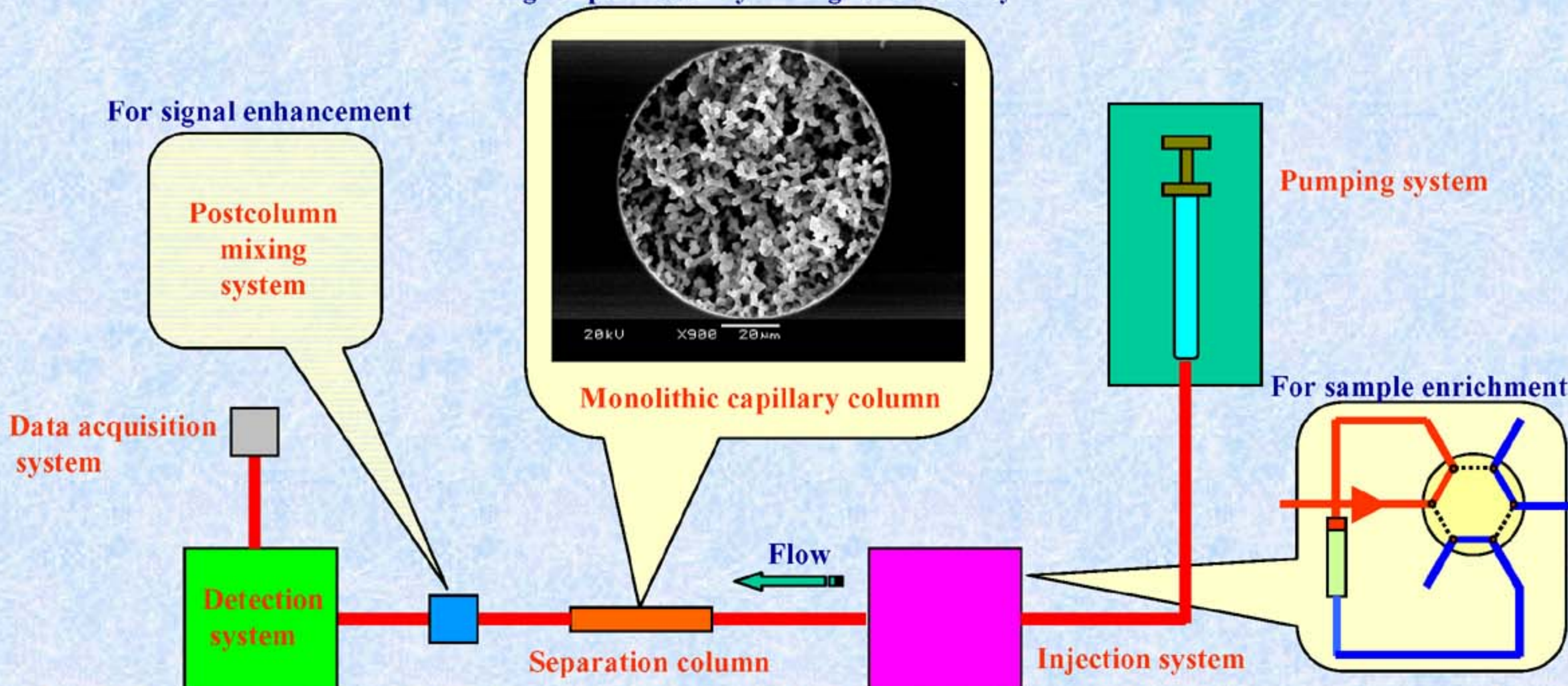


Features of capillary LC

<Goal>

Development of high-efficiency capillary columns
↓
Development of environment-friendly high-efficiency capillary separation analytical system

Higher permeability → Higher efficiency



Environment-friendly High-efficiency Capillary Separation Analytical System