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 Recycling Preparative HPLC
LaboACE LC-5060

Separation of compounds that are inseparable by Silica columns 1

Keyword:

GPC Column, SEC Column, Size Exclusion Chromatography, Recycling Preparative HPLC

Introduction

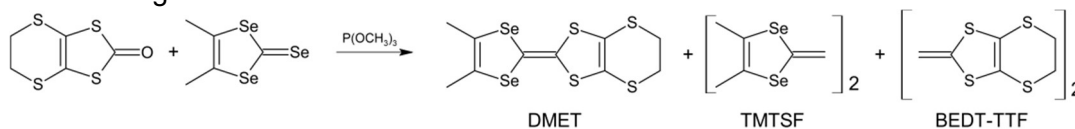
For substances that are unstable against silica-based fillers or that were inseparable by TLC, the combination of GPC (SEC) column and Recycling Preparative HPLC is often a very effective solution.

Here is an example of such studies by a professional who uses our Recycling Preparative HPLC system.

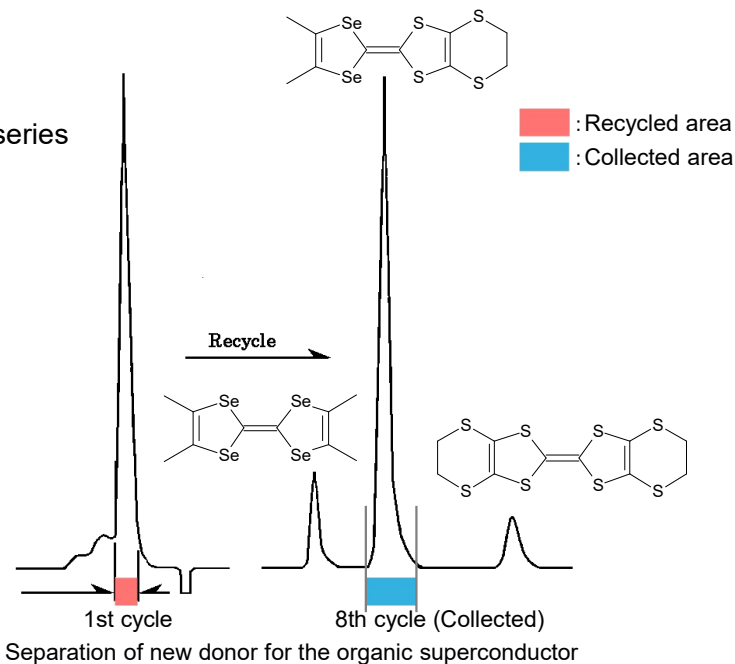
Experiment and Results

1, DMET (Dimethyl(ethylenedithio)diselenadithiafluvalene), is a donor molecule that gives organic material superconductivity. It is obtained by cross-coupling reaction, however, it also gives symmetric byproducts.

To isolate DMET from the reaction solution, we tried recycling preparative HPLC with GPC column as it is unstable against silica fillers.



Instrument : LC-908 (Detector : RI)
 Column : JAIGEL-1H + JAIGEL-2H in series
 Solvent : Chloroform
 Flow rate : 3.5 mL/min



Conclusion

1 was perfectly separated at the 8th cycle.

Now it is possible to prepare the intermediate very effectively by using JAIGEL-H column.

References

Keiji Kobayashi, Koichi Kikuchi, Takahisa Namiki and Isao Ikemoto, *Synthetic Metals*, 19 pp 555-558(1987)