# Article information:

One‐Step Formation of Targeted Liposomes in a Versatile Microfluidic Mixing Device - Shan - Small - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/10.1002/smll.202205498>

# Article summary:

1. A versatile microfluidic mixing device (MMD) is developed for one-step construction of targeted liposomes.

2. The MMD provides an advanced synthesis platform for multifunctional liposome with high production rate and controllability.

3. In vivo studies show that the Apt-ICG@Lip can realize PD-L1 targeted photoacoustic imaging, fluorescence imaging, and photothermal therapy.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “One‐Step Formation of Targeted Liposomes in a Versatile Microfluidic Mixing Device” by Shan et al. is a reliable source of information on the development of a versatile microfluidic mixing device (MMD) for one-step construction of targeted liposomes. The authors provide evidence to support their claims, such as experimental results from in vivo studies showing that the Apt-ICG@Lip can realize PD-L1 targeted photoacoustic imaging, fluorescence imaging, and photothermal therapy. Furthermore, the authors discuss various advantages of using this method over conventional methods, such as improved encapsulation efficiency (EE), smaller vesicle size, and higher reproducibility.

The article does not appear to be biased or promotional in nature; however, it does not present both sides equally as it focuses solely on the advantages of using this method over conventional methods without exploring any potential drawbacks or counterarguments. Additionally, there is no mention of possible risks associated with using this method or any other potential limitations that may arise from its use. Furthermore, there are some missing points of consideration that could have been explored further such as cost effectiveness and scalability of the MMD device compared to conventional methods.

In conclusion, while this article provides useful information on the development of a versatile microfluidic mixing device for one-step construction of targeted liposomes, it does not explore all aspects thoroughly and could benefit from further exploration into potential drawbacks or counterarguments as well as possible risks associated with its use.

# Topics for further research:

* Cost effectiveness of microfluidic mixing device
* Scalability of microfluidic mixing device
* Potential drawbacks of microfluidic mixing device
* Risks associated with microfluidic mixing device
* Counterarguments to microfluidic mixing device
* Limitations of microfluidic mixing device

# Report location:

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