



金屬疏水性碳材蜂巢式載體觸媒低溫焚燒技術消除油煙廢氣

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簡歷：(可列出相關連結，例如系所、研究室網頁)

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市場及需求：

本技術提供都會區的餐廳需求，具有經濟性的消除排放油煙臭味的效益。

技術摘要(含成果)：

本發明提供一個有效的方法和裝置去除油煙廢氣。以低溫觸媒焚燒完全去除臭味分子為主要目標，發展疏水性碳材載體，用於製備高活性低溫燃燒觸媒。疏水性貴金屬觸媒，能在較低溫氧化燃燒有機揮發氣體，除了減少焚燒所需補充燃料外，疏水性載體表面能避免油煙廢氣中大量水蒸氣對觸媒造成之影響，增強使用效率，可以徹底解決油煙臭味問題。並研發蜂巢式觸媒反應器，以降低風管的壓降損耗，發展全套的餐廳油煙消除設備，可供餐飲業使用，降低對都市社區居民健康之危害。

優勢：

疏水性貴金屬觸媒，在較低溫氧化燃燒有機揮發氣體，減少所需補充燃料。疏水性載體表面避免水蒸氣對觸媒造成之影響。發蜂巢式反應器，以降低風管的壓降損耗。

競爭產品：

目前市售去除油煙廢氣的裝置以水洗濕式法為主，本技術提供乾式焚燒法，完全氧化去除臭味分子，沒有廢水再需處理的後續費用和程序。

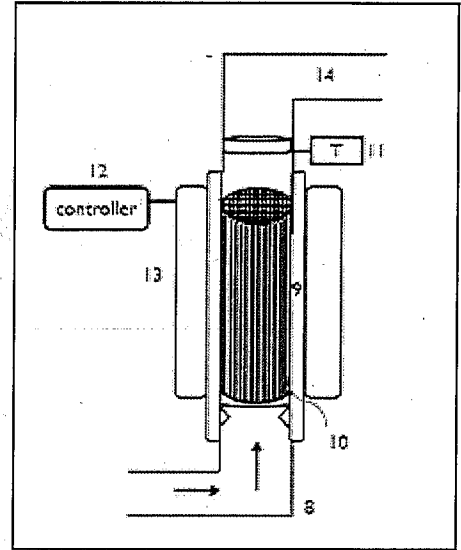
專利現況：

- (1)本技術經查無相關專利。
- (2)本研究團隊具有數年觸媒研究經驗，配合廠商有組裝溫控系統的能力。
- (3)其他...

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Low-temperature catalytic incineration of cooking-oil fume using hydrophobic noble-metal catalyst supported on honeycomb

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Experience:

<http://homepage.ntu.edu.tw/~cswu/professor/englishprofessor.html>

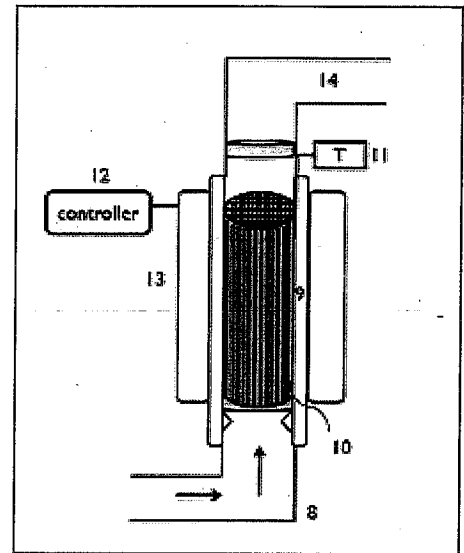
Market Needs:

The method provides a low-cost and efficient solution to eliminate odor molecules of cooking-oil fume from the kitchens in the urban area.

Our Technology:

The present invention provides a high-efficient method and equipment to remove cooking-oil fume.

The aims for the development of a low-temperature catalytic incineration to further destroy the odor molecules. The invention develops hydrophobic carbon material, which is used for the support of active low-temperature combustion catalysts. The hydrophobic noble-metal catalyst can completely oxidize VOCs at low temperature so that less fuel is required to sustain the working temperature. In addition, the activity of the catalyst can be enhanced because the moisture of the fume has little effect on the hydrophobic surface. Thus the odor of fume can be completely removed. We establish a honeycomb catalytic system that allows low-pressure drop in the duct of the kitchen hood. The invention is a whole system to removal oil fume from kitchens so the heath problem can be reduced for the urban population.



Strength:

The hydrophobic noble-metal catalyst completely oxidizes VOCs at low temperature so that less fuel is required. The moisture of the fume has negligible effect on the oxidation activity due to hydrophobic surface. A honeycomb catalytic system allows low-pressure loss in the duct.

Competing Products:

Current method to remove odor of kitchen is by wet scrubber. Our method is to oxidize odor molecules by catalytic incineration, thus save the cost and the process to treat waste water.

Intellectual Properties:

No similar patent is found.

Contact (do not need to fill out):

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