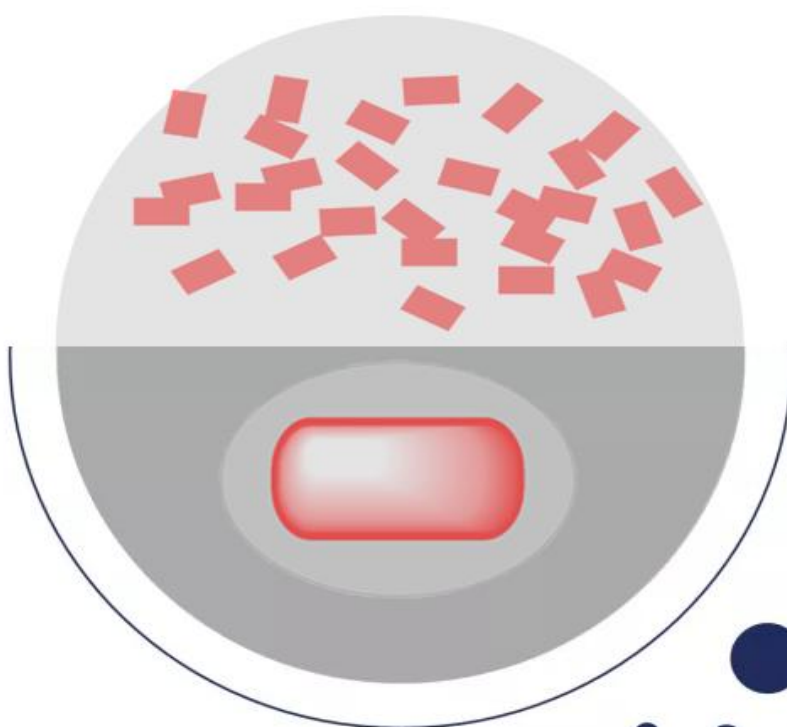


金纳米海胆

宣传册



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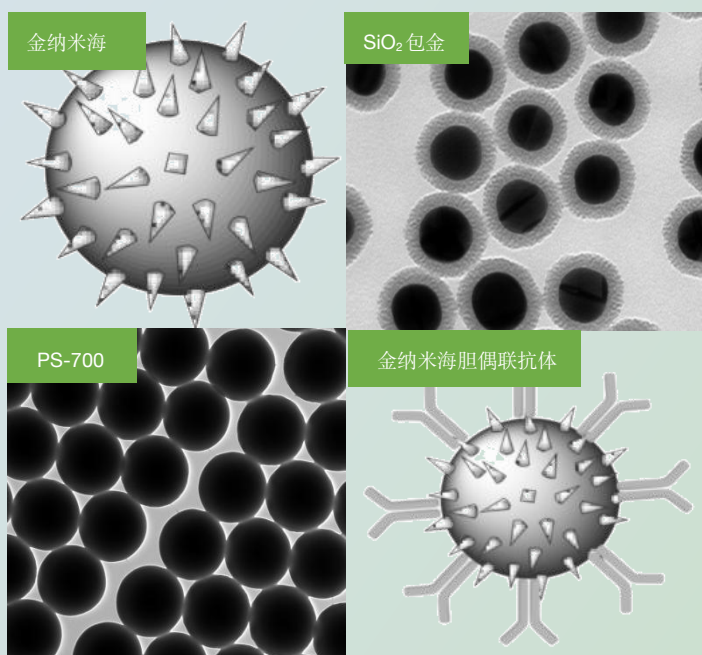
序

纳米技术是一种有关了解与掌握在纳米规模时之物质性质的新知识：一个纳米（即十亿分之一米）是一个小型分子的长度。在这样的情况下，物质的性质表现得不同而且经常很奇妙；现有各种科学与技术的区分界限也就消失了。因此，纳米技术的一种重要特性就是跨学科的。

纳米技术经常被描述为在工业生产方式上可能具有一种“破裂性”或“革命性”的能力。纳米技术可能可以透过更小、更轻、更快、更好的各种材料，为人类科研解决更多的技术难题。

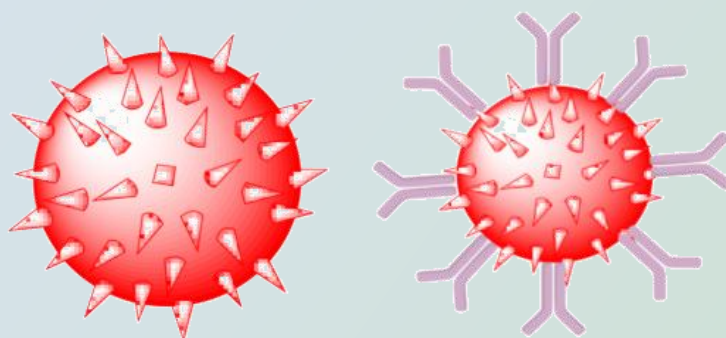
金纳米海胆

海胆状金纳米粒子的表面增强拉曼散射特性与其表面形貌有关。实验表明，合成的海胆状金纳米粒子的直径及表面的尖刺大小可以通过改变加入到氯金酸溶液中的硝酸银的量来调节。测量的紫外-可见-近红外吸收光谱表明，海胆状金纳米粒子的局域表面等离子体共振带会随着加入到氯金酸溶液中的硝酸银量的增加而变宽。通过拉曼标记分子对巯基苯甲酸的拉曼光谱测量发现，较小直径和较长尖刺的海胆状金纳米粒子具有更强的表面增强拉曼散射活性。



金纳米海胆

Gold NanoUrchins are unique spherical gold nanoparticles with sharp protrusions that can absorb far-infrared light. Compared with spherical gold nanoparticles with the same core diameter, the cell diagnostic non-functional Gold NanoUrchins have unique optical properties. The sharp and uneven surface will cause the red shift of the surface plasmon peak and produce a greater electromagnetic field enhancement at the tip of the Gold NanoUrchins. In addition, the binding of ligands such as proteins to the surface of Gold NanoUrchin can cause a large displacement of the surface plasmon peaks. The citrate covered on the surface of Gold NanoUrchins can effectively adsorb primary antibodies and other proteins. It is also possible to further modify and functionalize gold nanourea, thiol-containing ligands, such as PEG and oligonucleotides, by performing ligand exchange with, for example, NgO3. These particles can be used as an alternative to standard spherical gold nanoparticles in many applications, such as electron microscopy, immunostaining, and the development of biosensors.



Type	Citric acid Gold NanoUrchins
Volume	20 ml
Absorption Max	560nm - 670 nm
Buffer	Supplied in 0.1 mM PBS.
Core Size	50 nm - 100 nm
Storage	Stored at 4 °C. Do not freeze. Protect from light.

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【产品列表】

Cat No	Product Name	Size	Surface	SPR
BMGC-1-50	Gold NanoUrchins,50nm	20ml	Citric acid	560 nm
BMGC-1-60	Gold NanoUrchins,60nm	20ml	Citric acid	585 nm
BMGC-1-70	Gold NanoUrchins,70nm	20ml	Citric acid	600 nm
BMGC-1-80	Gold NanoUrchins,80nm	20ml	Citric acid	620 nm
BMGC-1-90	Gold NanoUrchins,90nm	20ml	Citric acid	630 nm
BMGC-1-100	Gold NanoUrchins,100nm	20ml	Citric acid	670 nm
BMGC-K-50	Maleimide Gold NanoUrchins Conjugation Kit , 50nm			
BMGC-K-60	Maleimide Gold NanoUrchins Conjugation Kit, 60nm			
BMGC-K-70	Maleimide Gold NanoUrchins Conjugation Kit , 70nm			
BMGC-K-80	Maleimide Gold NanoUrchins Conjugation Kit , 80nm			
BMGC-K-90	Maleimide Gold NanoUrchins Conjugation Kit , 90nm			
BMGC-K-100	Maleimide Gold NanoUrchins Conjugation Kit , 100nm			
BMGC-2K-50	NHS Gold NanoUrchins Conjugation Kit , 50 nm	3/10 Reactions		
BMGC-2K-60	NHS Gold NanoUrchins Conjugation Kit , 60 nm	3/10 Reactions		
BMGC-2K-70	NHS Gold NanoUrchins Conjugation Kit , 70 nm	3/10 Reactions		
BMGC-2K-80	NHS Gold NanoUrchins Conjugation Kit , 80 nm	3/10 Reactions		
BMGC-2K-90	NHS Gold NanoUrchins Conjugation Kit , 90 nm	3/10 Reactions		
BMGC-2K-100	NHS Gold NanoUrchins Conjugation Kit, 100 nm	3/10 Reactions		
BMGC-12-50	Carboxyl Gold NanoUrchins, 50nm	0.5ml		
BMGC-12-60	Carboxyl Gold NanoUrchins, 60nm	0.5ml		
BMGC-12-70	Carboxyl Gold NanoUrchins, 70nm	0.5ml		

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BMGC-12-80	Carboxyl Gold NanoUrchins, 80nm	0.5ml
BMGC-12-90	Carboxyl Gold NanoUrchins, 90nm	0.5ml
BMGC-12-100	Carboxyl Gold NanoUrchins, 100nm	0.5ml
BMGC-13-50	Methyl Gold NanoUrchins, 50nm	0.5ml
BMGC-13-60	Methyl Gold NanoUrchins, 60nm	0.5ml
BMGC-13-70	Methyl Gold NanoUrchins, 70nm	0.5ml
BMGC-13-80	Methyl Gold NanoUrchins, 80nm	0.5ml
BMGC-13-90	Methyl Gold NanoUrchins, 90nm	0.5ml
BMGC-13-100	Methyl Gold NanoUrchins, 100nm	0.5ml
BMGC-2-50	Anti-Human IgG (H+L) Gold NanoUrchins, 50nm	0.5 ml
BMGC-2-60	Anti-Human IgG (H+L) Gold NanoUrchins, 60nm	0.5 ml
BMGC-2-70	Anti-Human IgG (H+L) Gold NanoUrchins, 70nm	0.5 ml
BMGC-2-80	Anti-Human IgG (H+L) Gold NanoUrchins, 80nm	0.5 ml
BMGC-2-90	Anti-Human IgG (H+L) Gold NanoUrchins, 90nm	0.5 ml
BMGC-2-100	Anti-Human IgG (H+L) Gold NanoUrchins, 100nm	0.5 ml
BMGC-3-50	Anti-Rabbit IgG (H+L) Gold NanoUrchins, 50nm	0.5 ml
BMGC-3-60	Anti-Rabbit IgG (H+L) Gold NanoUrchins, 60nm	0.5 ml
BMGC-3-70	Anti-Rabbit IgG (H+L) Gold NanoUrchins, 70nm	0.5 ml
BMGC-3-80	Anti-Rabbit IgG (H+L) Gold NanoUrchins, 80nm	0.5 ml
BMGC-3-90	Anti-Rabbit IgG (H+L) Gold NanoUrchins, 90nm	0.5 ml
BMGC-3-100	Anti-Rabbit IgG (H+L) Gold NanoUrchins, 100nm	0.5 ml
BMGC-4-50	Anti-Mouse IgG (H+L) Gold NanoUrchins, 50nm	0.5 ml
BMGC-4-60	Anti-Mouse IgG (H+L) Gold NanoUrchins, 60nm	0.5 ml
BMGC-4-70	Anti-Mouse IgG (H+L) Gold NanoUrchins,	0.5 ml

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70nm		
BMGC-4-80	Anti-Mouse IgG (H+L) Gold NanoUrchins, 80nm	0.5 ml
BMGC-4-90	Anti-Mouse IgG (H+L) Gold NanoUrchins, 90nm	0.5 ml
BMGC-4-100	Anti-Mouse IgG (H+L) Gold NanoUrchins, 100nm	0.5 ml
BMGC-5-50	Anti-Rat IgG (H+L) Gold NanoUrchin, 50nm	0.5 ml
BMGC-5-60	Anti-Rat IgG (H+L) Gold NanoUrchin, 60nm	0.5 ml
BMGC-5-70	Anti-Rat IgG (H+L) Gold NanoUrchin, 70nm	0.5 ml
BMGC-5-80	Anti-Rat IgG (H+L) Gold NanoUrchin, 80nm	0.5 ml
BMGC-5-90	Anti-Rat IgG (H+L) Gold NanoUrchin, 90nm	0.5 ml
BMGC-5-100	Anti-Rat IgG (H+L) Gold NanoUrchin, 100nm	0.5 ml
BMGC-6-50	Anti-Sheep IgG (H+L) Gold NanoUrchins, 50nm	0.5 ml
BMGC-6-60	Anti-Sheep IgG (H+L) Gold NanoUrchins, 60nm	0.5 ml
BMGC-6-70	Anti-Sheep IgG (H+L) Gold NanoUrchins, 70nm	0.5 ml
BMGC-6-80	Anti-Sheep IgG (H+L) Gold NanoUrchins, 80nm	0.5 ml
BMGC-6-90	Anti-Sheep IgG (H+L) Gold NanoUrchins, 90nm	0.5 ml
BMGC-6-100	Anti-Sheep IgG (H+L) Gold NanoUrchins, 100nm	0.5 ml
BMGC-7-50	Streptavidin Gold NanoUrchins, 50nm	0.5 ml
BMGC-7-60	Streptavidin Gold NanoUrchins, 60nm	0.5 ml
BMGC-7-70	Streptavidin Gold NanoUrchins, 70nm	0.5 ml
BMGC-7-80	Streptavidin Gold NanoUrchins, 80nm	0.5 ml
BMGC-7-90	Streptavidin Gold NanoUrchins, 90nm	0.5 ml
BMGC-7-100	Streptavidin Gold NanoUrchins, 100nm	0.5 ml
BMGC-8-50	Protein A Gold NanoUrchins, 50nm	0.5 ml

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BMGC-8-60	Protein A Gold NanoUrchins, 60nm	0.5 ml
BMGC-8-70	Protein A Gold NanoUrchins, 70nm	0.5 ml
BMGC-8-80	Protein A Gold NanoUrchins, 80nm	0.5 ml
BMGC-8-90	Protein A Gold NanoUrchins, 90nm	0.5 ml
BMGC-8-100	Protein A Gold NanoUrchins, 100nm	0.5 ml
BMGC-9-50	Protein G Gold NanoUrchins, 50nm	0.5 ml
BMGC-9-60	Protein G Gold NanoUrchins, 60nm	0.5 ml
BMGC-9-70	Protein G Gold NanoUrchins, 70nm	0.5 ml
BMGC-9-80	Protein G Gold NanoUrchins, 80nm	0.5 ml
BMGC-9-90	Protein G Gold NanoUrchins, 90nm	0.5 ml
BMGC-9-100	Protein G Gold NanoUrchins, 100nm	0.5 ml
BMGC-10-50	Transferrin Gold NanoUrchins, 50nm	0.5 ml
BMGC-10-60	Transferrin Gold NanoUrchins, 60nm	0.5 ml
BMGC-10-70	Transferrin Gold NanoUrchins, 70nm	0.5 ml
BMGC-10-80	Transferrin Gold NanoUrchins, 80nm	0.5 ml
BMGC-10-90	Transferrin Gold NanoUrchins, 90nm	0.5 ml
BMGC-10-100	Transferrin Gold NanoUrchins, 100nm	0.5 ml
BMGC-11-50	Biotin Gold NanoUrchins, 50nm	0.5 ml
BMGC-11-60	Biotin Gold NanoUrchins, 60nm	0.5 ml
BMGC-11-70	Biotin Gold NanoUrchins, 70nm	0.5 ml
BMGC-11-80	Biotin Gold NanoUrchins, 80nm	0.5 ml
BMGC-11-90	Biotin Gold NanoUrchins, 90nm	0.5 ml
BMGC-11-100	Biotin Gold NanoUrchins, 100nm	0.5 ml

Applications

Development of peptide and protein gold conjugates for use in applications such as:

Blotting

Lateral flow

LSPR assays

Light microscopy

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Transmission electron microscopy (TEM)

Handling

When stored for a long period of time gold nanourchins may sediment at the bottom of the flask, which is especially true for larger particle sizes. Prior to use, re-suspend the sedimented particles by swirling until a homogenous solution is obtained. To maintain optimal performance, and stability of the colloidal gold, care should be taken to use clean storage containers if using other than supplied with the product.

Washing Gold Nanoparticles

The easiest way to remove possible contaminants in the nanoparticles solution is by centrifugation. Centrifugation force is dependent on size of the gold nanourchins and should be adjusted according to Table I for optimal performance.

Size (nm)	Speed (g)	Time (min)
50	2,000	30
60	1,125	30
80	600	30
100	400	30

Table I. Appropriate G forces for centrifugation of gold nanourchins. Note that recommended conditions are for a volume of 1 ml and centrifugation using a microcentrifuge.

Note

Since non-functionalized gold nanourchins are sensitive to salt containing buffers, re-suspension should always be performed in ultra-pure water to prevent irreversible aggregation. Irreversible aggregation is characterized by a clear to bluish solution upon the addition of salt. Please note that centrifugation can induce aggregation. To prevent aggregation it may be necessary to add Tween 20 at a concentration of 0.025% w/v.



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