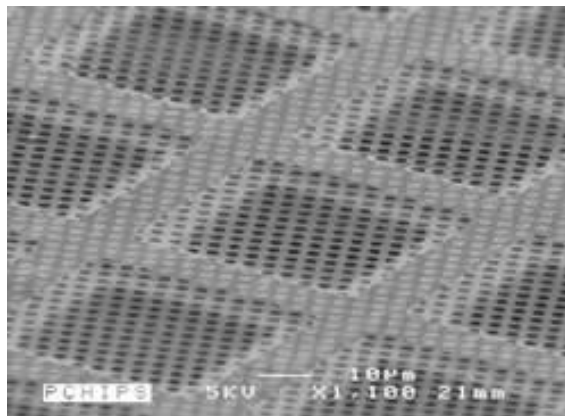


C-flat™ Holey Carbon Grids for cryo-TEM

C-flat™ is the premier holey carbon grid for cryo-transmission electron microscopy.



Overview

C-flat™ is an ultra-flat, holey carbon-coated TEM support grid for transmission electron microscopy (TEM). Unlike competing holey carbon films, C-flat™ is manufactured without plastics, so it is clean upon arrival and the user has no residue to contend with.

The C-flat™ Advantage

C-flat™ leads to better data sets.

Made with patent pending technology, C-flat™ provides an ultra-flat surface that results in better particle dispersion and more uniform ice thickness. Patterning is done using deep-UV projection lithography, ensuring the most accurate and consistent hole shapes and sizes down to submicron features. The precise methods by which C-flat™ is manufactured eliminate artifacts such as excess carbon and edges around holes.

C-flat™ is affordable

C-flat™ is available in 25, 50, and 100 packs at a per-grid price less than competing products.

Applications

C-flat™ holey carbon grids provide the ideal specimen support to achieve high resolution data in cryo-TEM making them an ideal choice for single particle analysis, cryo electron tomography and automated TEM analysis.



Frozen-hydrated Bacteriophage Capsid
(data acquired on CF-1.2/1.3-4C)

Cryo-electron tomography (cryoET) and Single Particle Analysis (SPA):

Numerous researchers have reported that the ultra-flat surface of C-flat™ leads to even ice thickness and uniform particle distribution within the hole areas. This optimal particle distribution results in superior data being collected as compared with other holey support films. 2µm hole sizes are standard but custom hole sizes are available so C-flat™ can accommodate the common magnifications used for quantitative TEM analysis.

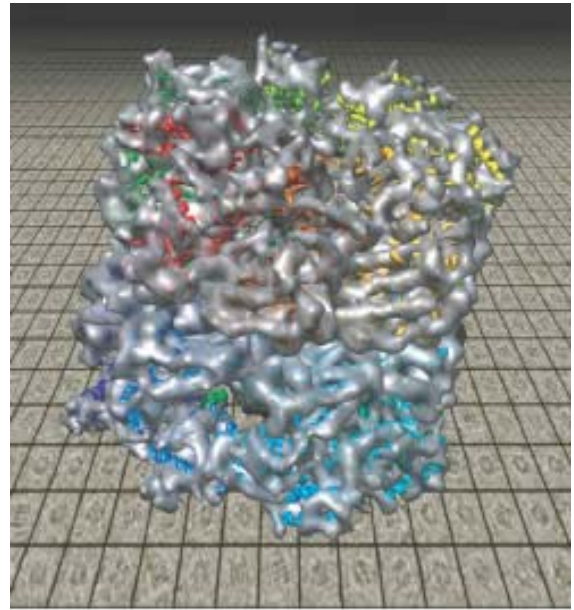
Automated TEM:

C-flat™ provides a regular array of analysis sites compatible with automated data collection software such as Legion. This compatibility, in combination with the more uniform ice thickness and particle distribution reported by numerous researchers, results in more high-quality target sites per grid.

Publications using C-flat™:

Does contamination buildup limit through put for automated cryoEM? , Journal of Structural Biology, Volume 154, Issue 3, June 2006, Pages 303-311 Anchi Cheng, Denis Fellmann, James Pulokas, Clinton S. Potter and Bridget Carragher

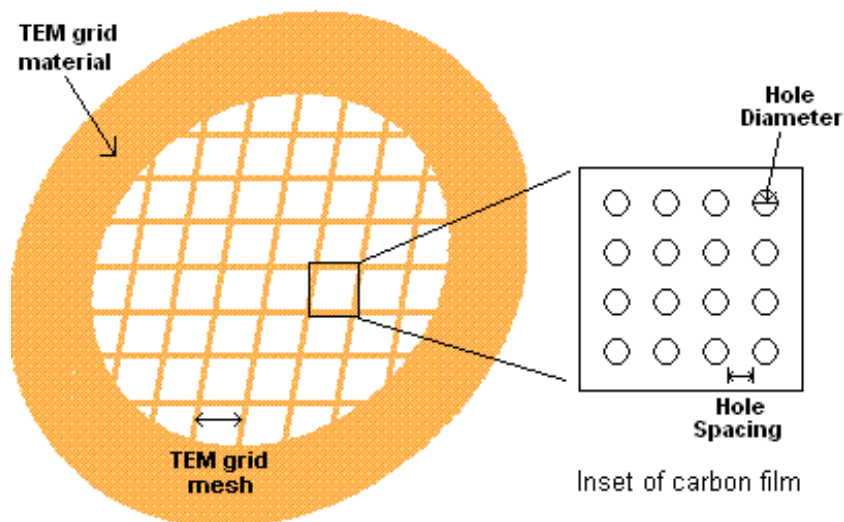
Automated cryoEM data acquisition and analysis of 284 742 particles of GroEL , Journal of Structural Biology, In Press, Uncorrected Proof, Available online 22 May 2006, Scott M. Stagg, Gabriel C. Lander, James Pulokas, Denis Fellmann, Anchi Cheng, Joel D. Quispe, Satya P. Mallick, Radomir M. Avila, Bridget Carragher and Clinton S. Potter



250,000 particles of GroEL in 24 hours Image
Courtesy of Scott Stagg and Mike Pique NRAMM,
The Scripps Research Institute (data aquired on
CF-2/2-4C)

Product Line

C-flat™ is a holey carbon film supported by a standard TEM grid. C-flat™ products are fully specified by 4 parameters: the hole diameter and pitch of the holey carbon film and the material type and mesh size of the TEM grid. The following image illustrates these parameters:



Standard Products

The breadth of applications in cryoTEM necessitate a wide range of holey carbon film patterns. And now, with the recent expansion of the product line, a C-flat™ holey carbon film is available for almost any application. Whether 600nm holes are needed for very high magnifications with ultra-high resolution cameras or large open areas are needed for larger specimens, C-flat™ is the perfect holey carbon grid.

C-flat™ is immediately available in several standard array patterns including hole diameters/hole spacings of 0.6/2, 1/1, 1/2, 1/4, 1.2/1.3, 2/1, 2/2, 2/4, 4/2, and a multihole pattern. C-flat™ is supported by your choice of a 200 mesh or 400 mesh copper TEM grid and sold in quantities of 25, 50, or 100.

Product	1500x (45°)	3000x	10,000x	20,000x
CF-MH-2C CF-MH-4C multi hole and space				
CF-1/1-2C CF-1/1-4C 1.0µm hole, 1.0 µm space				
CF-1.2/1.3-2C CF-1.2/1.3-4C 1.2µm hole, 1.3 µm space				
CF-2/1-2C CF-2/1-4C 2.0µm hole, 1.0µm space				
CF-2/2-2C CF-2/2-4C 2.0µm hole, 2.0µm space				
CF-2/4-2C CF-2/4-4C 2.0µm hole, 4.0µm space				
CF-4/2-2C CF-4/2-4C 4.0µm hole, 2.0µm space				

C-flat™ mounted on a stub using carbon tape and imaged with a Field Emission Scanning Electron Microscope

Ordering Information: C-flat™ Holey Carbon Grids for TEM

Product Code	Cat. #	Hole Size	Hole Spacing	TEM mesh	TEM Grid	Pack
CF-1.2/1.3-2C	CF213-25	1.2 µm	1.3 µm	200	Cu	25/pk.
	CF213-50	1.2 µm	1.3 µm	200	Cu	50/pk.
	CF213-100	1.2 µm	1.3 µm	200	Cu	100/pk.
CF-1.2/1.3-4C	CF413-25	1.2 µm	1.3 µm	400	Cu	25/pk.
	CF413-50	1.2 µm	1.3 µm	400	Cu	50/pk.
	CF413-100	1.2 µm	1.3 µm	400	Cu	100/pk.
CF-2/0.5-2C	CF205-25	2.0 µm	0.5 µm	200	Cu	25/pk.
	CF205-50	2.0 µm	0.5 µm	200	Cu	50/pk.
	CF205-100	2.0 µm	0.5 µm	200	Cu	100/pk.
CF-2/0.5-4C	CF405-25	2.0 µm	0.5 µm	400	Cu	25/pk.
	CF405-50	2.0 µm	0.5 µm	400	Cu	50/pk.
	CF405-100	2.0 µm	0.5 µm	400	Cu	100/pk.
CF-2/1-2C	CF212-25	2.0 µm	1.0 µm	200	Cu	25/pk.
	CF212-50	2.0 µm	1.0 µm	200	Cu	50/pk.
	CF212-100	2.0 µm	1.0 µm	200	Cu	100/pk.
CF-2/1-4C	CF412-25	2.0 µm	1.0 µm	400	Cu	25/pk.
	CF412-50	2.0 µm	1.0 µm	400	Cu	50/pk.
	CF412-100	2.0 µm	1.0 µm	400	Cu	100/pk.
CF-2/2-2C	CF-222C-25	2.0 µm	2.0 µm	200	Cu	25/pk.
	CF-222C-50	2.0 µm	2.0 µm	200	Cu	50/pk.
	CF-222C-100	2.0 µm	2.0 µm	200	Cu	100/pk.
CF-2/2-4C	CF-224C-25	2.0 µm	2.0 µm	400	Cu	25/pk.
	CF-224C-50	2.0 µm	2.0 µm	400	Cu	50/pk.
	CF-224C-100	2.0 µm	2.0 µm	400	Cu	100/pk.
CF-2/4-2C	CF242-25	2.0 µm	4.0 µm	200	Cu	25/pk.
	CF242-50	2.0 µm	4.0 µm	200	Cu	50/pk.
	CF242-100	2.0 µm	4.0 µm	200	Cu	100/pk.
CF-2/4-4C	CF442-25	2.0 µm	4.0 µm	400	Cu	25/pk.
	CF442-50	2.0 µm	4.0 µm	400	Cu	50/pk.
	CF442-100	2.0 µm	4.0 µm	400	Cu	100/pk.
CF-4/1-2C	CF214-25	4.0 µm	1.0 µm	200	Cu	25/pk.
	CF214-50	4.0 µm	1.0 µm	200	Cu	50/pk.
	CF214-100	4.0 µm	1.0 µm	200	Cu	100/pk.
CF-4/1-4C	CF414-25	4.0 µm	2.0 µm	400	Cu	25/pk.
	CF414-50	4.0 µm	2.0 µm	400	Cu	50/pk.
	CF414-100	4.0 µm	2.0 µm	400	Cu	100/pk.
CF-4/2-2C	CF422-25	4.0 µm	2.0 µm	200	Cu	25/pk.
	CF422-50	4.0 µm	2.0 µm	200	Cu	50/pk.
	CF422-100	4.0 µm	2.0 µm	200	Cu	100/pk.
CF-4/2-4C	CF424-25	4.0 µm	2.0 µm	400	Cu	25/pk.
	CF424-50	4.0 µm	2.0 µm	400	Cu	50/pk.
	CF424-100	4.0 µm	2.0 µm	400	Cu	100/pk.

Product Code	Cat. #	Hole Size	Hole Spacing	TEM mesh	TEM Grid	Pack
CF-MH-2C	CF2MH-25		Multihole*	200	Cu	25/pk.
	CF2MH-50		Multihole*	200	Cu	50/pk.
	CF2MH-100		Multihole*	200	Cu	100/pk.
CF-MH-4C	CF4MH-25		Multihole*	400	Cu	25/pk.
	CF4MH-50		Multihole*	400	Cu	50/pk.
	CF4MH-100		Multihole*	400	Cu	100/pk.
CF-1/1-2C	CF21-25	1.0 µm	1.0 µm	200	Cu	25/pk.
	CF21-50	1.0 µm	1.0 µm	200	Cu	50/pk.
	CF21-100	1.0 µm	1.0 µm	200	Cu	100/pk.
CF-1/1-4C	CF41-25	1.0 µm	1.0 µm	400	Cu	25/pk.
	CF41-50	1.0 µm	1.0 µm	400	Cu	50/pk.
	CF41-100	1.0 µm	1.0 µm	400	Cu	100/pk.

C-flat™ Customization

We realize that each customer has unique needs since specimens vary greatly in composition and size. To meet the diverse and demanding needs of the cryoTEM community, C-flat™ can be customized to meet a user's specific requirements. For example, C-flat™ can be manufactured on other grid types such as Gold grids, 100x400 mesh grids, or London Finder grids. The size, shape and spacing of the holes perforating the carbon film can also be customized. For examples, those using electron tomography techniques might desire a larger hole size to allow for increased tilt angles; those using very high magnifications might find a smaller hole size desirable; 2D crystallographers might prefer a sparse hole pattern to take advantage of the clean and ultra flat surface of C-flat™; and based upon the specimen preparation and imaging protocols, grid metals other than copper might be required.

C-flat™ can be customized to meet all of these needs.

Please contact us with any custom C-flat™ requests. We will be glad to provide you with a quote for specialized C-flat™ grids. Requests for customized parts can be made directly to us via e-mail to info@scienceservices.eu