resolution. Resolution is also related to the stability of the spot size, that is a variable spot diameter will limit resolution. Resolution is also related to the nature of the specimen, that is how the beam spreads when it interacts with the specimen.

To illustrate the relation of spot size to resolution to my students, I step up to the blackboard and draw an outline of my hand with fingers outstratched. Then I demonstrate how this hand would be imaged as a mitten with large spots and how the fingers could be resolved by using small spots for imaging.

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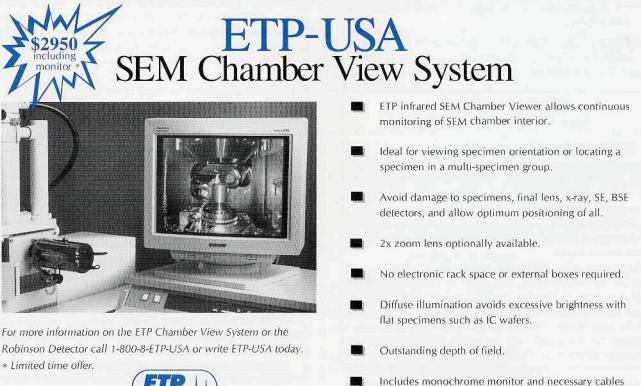
Isolation of Single Crystals from Liquid Drops Walter C. McCrone, McCrone Research Institute

Microscopists often recrystallize or precipitate compounds for purposes of identification. Almost as often, a few crystals form that are irresistibly beautiful and demand isolating for single-crystal x-ray diffraction, spindle stage, polarized IR absorption, or remounting in a crystal-rolling medium like Aroclor[®] 1260.

The isolation of one such crystal among hundreds from the center of a drop is not as difficult as it sounds. It is done at 50-100X under a stereomicroscope using a fine, usually a tungsten, needle. The needle may (rarely) need to be surface-treated by rubbing with a water-insoluble wax (then tissue-wiped "clean") to prevent creeping of the solution up the needle and causing solution (and crystal) movement.

The needle is used to clear a path for the desired crystal by pushing the edge crust and other intervening crystals to one side. Complete clearance is not necessary. The desired crystal is then pushed with the needle along the slide to the edge and then well outside of the drop. A few smaller crystals and much solution may accompany it. An isthmus of solution is usually left back to the drop. The extraneous crystals are needed back into the drop and a small square of filter paper is used to cut the isthmus and leave the crystal in a small droplet of solution. The needle is then repeatedly touched to the remaining solution and small drops are thereby removed to a safe distance. This renders the crystal nearly dry but is is then pushed along the clean slide surface until it has left all of its surface liquid behind. It must be pushed until completely dry (10 seconds +/-). It is then ready for remounting.

The same procedure is adaptable to other solvents if precautions are taken to prevent spreading of low surface tension solvents. This is essentially impossible for low boiling solvents but can be done for DMF, diethylene glycol, alcohols above C_2 and higher boiling liquids like nitrobenzene, tricresyl phosphate, benzyl alcohol, and monobromonaphthalene.



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<u>FIBER IDENTIFICATION</u> July 11-15. Optical characterization of natural and synthetic fibers using the polarized light microscope. Taught by Skip Palenik.

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<u>CRYSTAL MORPHOLOGY AND OPTICS</u> September 26-30. An introductory course. Use of petrographic methods to characterize crystalline substances. Taught by Walter McCrone.

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INTER/MICRO-94 celebrates the 46th Anniversary of these microscopy conferences at the Knickerbocker Hotel in Chicago, 18-21 July 1994. You will have the opportunity to come up-todate on new instruments for, new techniques in, and new applications of, microscopy.

"General Session", "Art Conservation and History", "Environmental Update", "Forensics" and "Hi-Tech microscopy" are the session topics.

Brian Ford will continue the traditional "An Evening with Brian" on Monday evening, "The Shape of Things Past" hosted by Martin Scott is Tuesday evening, and the Annual Award Dinner and Auction is Wednesday evening, held in conjunction with the State Microscopical Society of Illinois.

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Detailed information covering courses and I/M-94 can be received from Nancy Daerr, McCrone Research Institute 2820 S. Michigan Avenue, Chicago, IL 60616-3292 Phone: 312/842-7100, Fax: 312/842-1078

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MAKING ELECTRONIC CONVERSATION

When you're "talking" to an online friend in eMail, you can't see each other's face - so you miss the smiles, winks and frowns that add meaning to conversation and lend context to cold words. Longtime navigators in the electronic network have come up with a substitute.

It is called an "emoticon", an icon reflecting emotion. That particular combination of colons, hyphens, etc., when viewed from the side, suddenly snaps into the familiar smiley face and takes the place of a friendly smile. Several are as follows:

:-)	Smile
:-(Frown
;-)	Wink
:-D	Big Smile
:-0	Mouth open in amazement
Q	Tongue hanging out in nausea or disgust.
:-{)	Smile (user has a moustache)
:-{)}	Smile (user has a moustache and beard)
8-)	Smile (user wears glasses)
(Smile (user is left handed or Australian)
*<(:{)}	Smile, user is Santa Claus

In addition to emoticons, experienced eMail regulars use a variety of shorthand abbreviations to save time and keystrokes in expressing frequently repeated concepts. Here are a few:

BRB - Be right back	IMHO - In my humble/honest opinion	
BTW - By the way	OTOH - On the other hand	
FWIW - For what it's worth	PMJI - Pardon my jumping in	
FYI - For your information	ROFL - Rolling on floor, laughing	
GD&R - Grinning, ducking and	GD&WVVF - Grinning, ducking &	
running (after snide remark)	walking very, very fast	
IANAL - I am not a lawyer (but) IMO - In my opinion		
TIA - Thanks in advance	1	
TTFN - Ta-Ta for now	Regards, 8-{)=()= :	

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