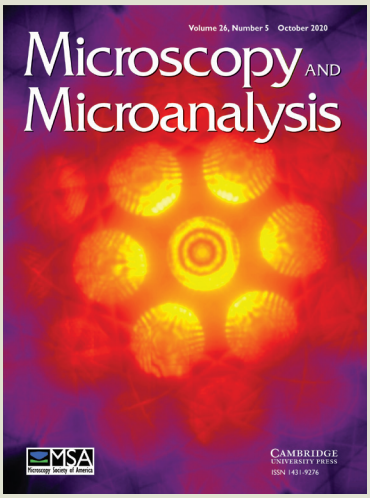
Volume 26 Number 5 October 2020

Microscopy AND Microanalysis

table of contents



Materials Science Applications

An improved electron microprobe method for the analysis of halogens in natural silicate glasses
Flemetakis, Stamatis; Berndt, Jasper; Klemme, Stephan; Genske, Felix; Cadoux, Anita; Louvel, Marion; Rohrbach, Arno

Ultra-Microtome for the Preparation of TEM Specimens from Battery Cathodes
Zhou, Guangwen; Zhang, Hanlei; Wang, Chong-Min

Nanoscale Visualization of Phase Transition in Melting of Sn-Bi Particles by *In situ* Hard X-ray Ptychographic Coherent Diffraction Imaging
Takahashi, Yukio; Ishiguro, Nozomu; Higashino, Takaya; Hirose, Makoto

Dynamic precipitation, dynamic recrystallization and texture evolution of Mg-5Zn alloy sheets with trace Ca and Sr addition
Yan, Hongge; Wu, Qin; Chen, Jihua; Xia, Weijun; Song, Min; Su, Bin; Ding, Tian

Correction of secondary fluorescence across phase boundaries in electron probe microanalysis of mineral inclusions
Llovet, Xavier; Proenza, Joaquin; Pujol-Solà, Núria; Ferré-de-Pablo, Júlia; Campeny, Marc

Software and Instrumentation

Contamination of TEM Holders Quantified and Mitigated with Open-Hardware, High-Vacuum Bakeout System
Hovden, Robert; Goh, Yin Min; Schwartz, Jonathan; Rennich, Emily; Ma, Tao; Kerns, Bobby

CDrift: an algorithm to correct linear drift from a single high-resolution STEM image
Bárcena González, Guillermo; Guerrero-Lebrero, María de la Paz; Guerrero, Elisa; Yañez, Andres; Nuñez-Moraleda, Bernardo; Fernandez, Daniel; Real, Pedro; González, David; Galindo, Pedro

Optimal STEM Convergence Angle Selection using a Convolutional Neural Network and the Strehl Ratio
Hovden, Robert; Schnitzer, Noah; Sung, Suk Hyun

Application of blind deconvolution based on the new weighted L1-norm regularization with alternating direction method of multipliers in light microscopy images
Lee, Youngjin; Kim, Ji-Youn; Kim, Kyuseok

Expanding the dimensions of a small, two-dimensional diffraction detector
LeBeau, James; Chen, Xi; Hauwiller, Matthew; Kumar, Abinash; Penn, Aubrey

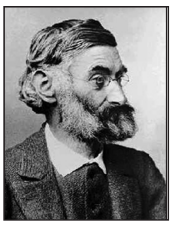
Fast Pixelated Detectors in Scanning Transmission Electron Microscopy. Part II: Post Acquisition Data Processing, Visualisation, and Structural Characterisation
Paterson, Gary; Webster, Robert; Ross, Andrew; Paton, Kirsty; Macgregor, Thomas; McGrouther, Damien; MacLaren, Ian; Nord, Magnus

Processing APT Spectral Backgrounds for Improved Quantification
Haley, Daniel; Moody, Michael; London, Andrew

Mathematical mirroring for identification of local symmetry centers in microscopic images
Willemse, Joost; van der Vaart, Michiel; Yang, Wen; Briegel, Ariane

Biological Applications

Advanced microtexture study of *Anacardium occidentale* L. leaf surface from Amazon by fractal theory
da Fonseca Filho, Henrique; Ramos, Glenda; Matos, Robert



Dear Abbe

Dear Abbe,

I want to paint my SEM column orange, in homage to Zeiss vintage equipment, sort of an "orange homage," if you will. How do I convince my higher-ups that this is indeed a good idea?

Tired of Gray in California

Dear 50 Shades of Tired,

Ah yes, the orange phase of Zeiss. Having spent some time with the company in Jena, I can wholeheartedly agree with your assessment that Orange is the new Gray. It just seems more … Oktoberfestive! Otto Schott and I used to suggest many bright tones on the production of light microscopes and equipment. Unfortunately, the stodgy foundation members loved the "dignified" look of that Nachkriegszeit Kitt color. It is always difficult to convince higher-ups of anything unless money is involved. Try convincing them that orange increases productivity, accuracy, and camaraderie and they may just jump on it (the idea, hopefully not the scope).

Sometimes life hands you lemons, sometimes it hands you something that looks and smells less appealing. Let Abbe give you the tools to make anything appear more palatable. Contact Herr Abbe's assistant at johnshields59@gmail.com.

MT

Crossword Puzzle Answers

See puzzle on page 68.

1 S	2 M	A	3 L	L	4 A	5 N	6 G	7 L	E	■	8 T	9 M	10 B	A
11 I	O	■	O	■	12 U	D	O	N	■	13 A	I	R	Y	■
14 N	I	15 T	R	16 O	G	E	N	■	17 M	Y	S	E	L	18 F
19 G	R	O	O	V	E	■	I	■	20 A	O	C	■	21 A	I
22 L	E	T	■	23 E	R	24 R	O	25 R	S	■	26 H	27 O	W	E
E	■	28 S	29 I	N	■	H	■	30 I	S	31 S	■	32 L	S	L
33 P	34 A	■	N	■	35 H	E	36 E	■	■	37 A	38 A	I	■	D
39 A	C	40 C	E	41 P	T	A	N	42 C	43 E	A	N	G	44 L	E
R	■	45 U	R	L	■	■	46 T	Y	M	P	A	N	U	M
47 T	48 U	■	49 T	O	50 R	R	■	■	51 P	E	■	Y	■	I
52 I	N	53 S	I	T	U	■	54 A	55 L	A	R	56 M	■	■	S
57 C	O	M	A	■	D	■	58 M	I	D	T	E	59 R	60 M	S
L	■	61 A	L	62 T	O	■	63 A	M	■	64 U	T	E	R	I
65 E	66 E	L	■	67 G	L	68 A	Z	E	■	69 R	A	T	I	O
70 S	I	L	I	■	71 F	R	E	S	N	E	L	■	72 S	N

https://doi.org/10.1017/S1551929520001248 Published online by Cambridge University Press