

necessary to dehydrate and reduce the ferric hydroxide to bog ore.

THE English Ceramic Society has recently issued the twelfth volume of its Transactions, and is to be congratulated on the good work which it continues to do in furthering the application of scientific methods to so important an industry. Attention may be directed specially to a paper by Mr. A. J. Campbell in which the application of "surface combustion" to pottery practice is suggested, and to a description by Dr. W. R. Ormandy of an "Electrical Process for the Purification of Clays." This consists in partially coagulating the emulsified clay by the addition of electrolytes, and then further purifying the emulsion by passing it through a vessel containing electrodes differing in potential by 60 to 100 volts. The chief impurities are electropositive, and can thus be removed, even when present in very fine particles. The clay-substance is electronegative, and is laid down in the form of a continuous blanket 1½ yards wide and ¼ in. thick. It is deposited in a remarkably dry state with only 18 to 20 per cent. of water, and may contain as much as 99.5 per cent. of china-clay substance.

MESSRS. J. AND A. CHURCHILL have nearly ready an English translation of the Italian work, "A Treatise on General and Industrial Organic Chemistry," by Dr. Ettore Molinari. The work of translation has been carried out by Mr. T. H. Pope, of the School of Matting and Brewing of the University of Birmingham.

AN examination of "The Social Guide, 1913," which has now been issued by Messrs. A. and C. Black, at the price of 2s. 6d. net, shows that the editors regard some scientific meetings at least as social events. Attention is directed, for instance, to the meetings of the Royal Society, the Royal Institution, the Royal Geographical Society, and the British Association. The University Extension meetings arranged in the summer by the Universities of Oxford and Cambridge are also referred to, but, speaking generally, the matters of prominence relate to sports and amusements. The subjects are arranged alphabetically, but an index would assist reference greatly.

ERRATUM.—The term  $\frac{\Sigma P - P.N}{\frac{N}{2}}$  on p. 279 of NATURE of May 15 should have been  $\frac{\Sigma P - P.M}{\frac{N}{2}}$ .

OUR ASTRONOMICAL COLUMN.

ASTRONOMICAL OCCURRENCES FOR JUNE:—

- June 1. 4h. 4m. Venus in conjunction with the Moon (Venus 4° 38' S.).
- " 12h. 0. Mercury in superior conjunction with the Sun.
- 4. 0h. 25m. Saturn in conjunction with the Moon (Saturn 6° 22' S.).
- " 16h. 4m. Mercury in conjunction with the Moon (Mercury 3° 48' S.).
- 7. 4h. 40m. Neptune in conjunction with the Moon (Neptune 5° 9' S.).
- 19. 14h. 26m. Jupiter in conjunction with the Moon (Jupiter 4° 47' N.).

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- June 21. 8h. 8m. Uranus in conjunction with the Moon (Uranus 3° 27' N.).
- " 13h. 9m. Sun enters Sign of Cancer—summer commences.
- 22. 6h. 0m. Vesta in conjunction with the Moon (Vesta 0° 31' N.).
- 23. 22h. 35m. Mercury in conjunction with Neptune (Mercury 2° 11' N.).
- 24. 2h. 0m. Venus at greatest distance from the Sun.
- 29. 5h. 5m. Mars in conjunction with the Moon (Mars 4° 51' S.).
- 30. 7h. 4m. Venus in conjunction with the Moon (Venus 7° 44' S.).

COMET 1913a (SCHAUMASSE).—*Astronomische Nachrichten* No. 4652 contains not only numerous observations of the comet which Mr. Schaumasse discovered, but three sets of elements and ephemerides computed by Kiess and Nicolson, Ebell, and Fayet and Schaumasse. The observations made between May 7 and 11 give the magnitude between 9.5 and 11.

The following parabolic elements are those calculated by the last two observers mentioned above, and they are based on Schaumasse's observations at Nice on May 6, 7, and 8:—

$$\begin{aligned} T &= 1913 \text{ May } 15^{\text{h}} 4222 \text{ M.T. Paris.} \\ \omega &= 53^{\circ} 32' 8'' \\ \Omega &= 315 \quad 21 \quad 7 \\ i &= 1^{\circ} 2 \quad 31 \quad 26 \\ \log q &= 0.162920 \end{aligned} \quad \left. \vphantom{\begin{aligned} T \\ \omega \\ \Omega \\ i \\ \log q \end{aligned}} \right\} 1913 \text{ o}$$

Ephemeris for 12h. M.T. Paris.

		h.	m.	s.	δ
May 30	...	17	45	55	+38 31
June 1	...	17	15	56	+40 6
" 3	...	16	45	33	+41 9
" 5	...	16	15	50	+41 35

EFFECTIVE TEMPERATURES OF STARS.—An important communication is published in the *Comptes rendus* of May 5 (vol. clvi., No. 18, p. 1355), by Dr. Charles Nordmann, relative to the effective temperatures of stars. It will be remembered that Dr. Rosenberg published recently (*Astronomische Nachrichten*, No. 4628, p. 360) the results of measures of the effective temperatures of seventy stars based on the determinations of the intensity of the photographic spectra. It will be remembered also that Dr. Nordmann made a like series of measures based, on the other hand, on visual observations. As the two series of measures deal with different regions of the spectrum they may be considered as independent determinations, and Dr. Nordmann here compares the results obtained in cases where the same star has been measured. The following table shows the resulting comparison:—

	Effective temperatures (in absolute degrees)			Spectral types (Lockyer)
	Nordmann		Rosenberg	
	AA 460-630	AA 400-500		
δ Persei	18500	15500	...	Algolian
ε "	15200	23000	...	Crucian
β " (Algol)	13300	12000	...	Algolian
α Lyrae (Vega)	12200	22000	...	Sirian
α Persei	8300	6500	...	Polarian
α Ursae Minoris (Polaris)	8200	5200	...	"
α Canis Minoris (Procyon)	6800	7000	...	Procyonian
γ Cygni	5620	5100	...	Polarian
Sun	5320	4950	...	Arcturian
α Aurigae (Capella)	4720	4500	...	"
β Andromedae	3700	2650	...	Antarian
α Tauri (Aldebaran)	3500	2150	...	Aldebarian

Dr. Nordmann directs attention to the good agreement of the two series, with one or two exceptions, which he discusses, and points out that if the stars be arranged in the order of ascending temperatures they become hotter and hotter as one passes from the