|    |    | 1 |    |  |    |   |   | 19 |    |   |   |    |    |    |    |  |
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|    |    | 2 |    |  |    |   |   |    |    |   |   | 3  |    |    |    |  |
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|    |    |   |    |  |    |   | 4 |    |    |   |   |    |    |    |    |  |
| 5  | 20 |   | 21 |  |    |   |   |    |    | 6 |   |    |    |    | 22 |  |
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|    |    |   |    |  |    | 7 |   |    |    |   | 8 |    |    | 23 |    |  |
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|    |    |   |    |  |    |   | 9 |    |    |   |   |    |    |    |    |  |
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|    |    |   |    |  | 10 |   |   |    |    |   |   |    |    |    |    |  |
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|    |    |   |    |  |    |   |   |    |    |   |   |    | 11 |    |    |  |
| 12 |    |   |    |  |    |   |   |    |    |   |   | 24 |    |    |    |  |
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|    |    |   |    |  | 13 |   |   |    |    |   |   |    |    |    |    |  |
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|    |    |   |    |  |    |   |   |    |    |   |   |    |    |    |    |  |
| 14 |    |   |    |  |    |   |   | 15 |    |   |   |    |    |    |    |  |
|    |    |   |    |  |    |   |   |    |    |   |   |    |    |    |    |  |
|    |    |   | 16 |  |    |   |   |    | 25 |   |   | 17 |    |    |    |  |
|    |    |   |    |  |    |   |   |    |    |   |   |    |    |    |    |  |
|    |    |   | 18 |  |    |   |   |    |    |   |   |    |    |    |    |  |
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| Across |                |  |
|--------|----------------|--|
| 1      | HISTOGRAM      | A plot of the distribution of photon arrival times.  |
| 2      | SCATTERING     | A process in which a photon changes the direction of flight when incident on a larger particle.                      |
| 3      | PHOTON         | An elementary particle that carries electromagnetic force.   |
| 4      | CCD            | A camera in CYRIL that detects light.  |
| 5      | FIBRES         | Cables that can transport light.   |
| 6      | MAESTROS       | Metabolight's TR NIRS system.  |
| 7      | VIOLET         | Visible light colour with the shortest wavelengths.  |
| 8      | HALOGEN        | Type of gas used in incandescent lamps.  |
| 9      | RAINBOW        | A meteorological phenomenon when drops of water disperse, reflect and refract light.                                 |
| 10     | CRITICAL       | Total internal reflection occurs when the incident light ray is at an angle larger than the angle in an optic fibre. |
| 11     | LASER          | Light Amplification by Stimulated Emission of Radiation.   |
| 12     | SUPERCONTINUUM | A laser that emits broadband light.  |
| 13     | HAEMOGLOBIN    | The carrier of oxygen in blood.  |
| 14     | ELECTRON       | A charged elementary particle.   |
| 15     | ABSORBS        | A leaf is green because it reflects green light and light of other colours.  |
| 16     | TIMERESOLVED   | A type of NIRS that measures the time of flight of photons.  |
| 17     | EPOXY          | The material used to house LEDs.   |
| 18     | MITOCHONDRIA   | The place where CCO is found in cells.   |

| Down |               |  |
|------|---------------|--|
| 3    | PLASMA        | Hot gas in which electrons are no longer bound.                    |
| 6    | METABOLISM    | The production of energy in cells.                                 |
| 10   | CYTOCHROME    | CYRIL stands for Research Instrument and appLication.              |
| 19   | MONOCHROMATIC | Light of only one wavelength.                                      |
| 20   | INFRARED      | An invisible part of the light spectrum following red wavelengths. |
| 21   | REFRACTIVE    | An index describing the reflection properties of a material.       |
| 22   | SPECTROMETER  | A device that separates light into its different wavelengths.      |
| 23   | OXYGENATION   | The process of adding oxygen.                                      |
| 24   | TUNGSTEN      | A metal used to make filaments in light bulbs.                     |
| 25   | LED           | A light source out of semiconductors.                              |

|   |   | Н | ı | S | Т | 0 | G | R | Α | М |   |   |   |   |   |   |   |   |   |   |   |  |
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|   |   |   |   |   |   |   |   |   | С | С | D |   |   |   |   | Α |   |   |   |   |   |  |
| F | ı | В | R | E | S |   |   |   |   | Н |   |   | М | Α | E | S | T | R | 0 | S |   |  |
|   | N |   | E |   |   |   |   |   |   | R |   |   | E |   |   | М |   |   |   | P |   |  |
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|   | R |   | R |   |   |   |   |   |   | М |   |   | Α |   |   |   |   | Х |   | С |   |  |
|   | Α |   | Α |   |   |   |   |   | R | Α | - | N | В | 0 | W |   |   | Υ |   | T |   |  |
|   | R |   | С |   |   |   |   |   |   | Т |   |   | 0 |   |   |   |   | G |   | R |   |  |
|   | E |   | T |   |   | С | R | ı | T | ı | С | Α | L |   |   |   |   | E |   | 0 |   |  |
|   | D |   | I |   |   | Υ |   |   |   | С |   |   | 1 |   |   |   |   | N |   | M |   |  |
|   |   |   | ٧ |   |   | T |   |   |   |   |   |   | S |   |   |   | L | Α | S | E | R |  |
| S | U | Р | E | R | С | 0 | N | Т | ı | N | U | U | М |   |   | Т |   | T |   | T |   |  |
|   |   |   |   |   |   | С |   |   |   |   |   |   |   |   |   | U |   | ı |   | E |   |  |
|   |   |   |   |   |   | Н | Α | E | M | 0 | G | _ | 0 | В | ı | N |   | 0 |   | R |   |  |
|   |   |   |   |   |   | R |   |   |   |   |   |   |   |   |   | G |   | N |   |   |   |  |
| E | L | E | С | T | R | 0 | N |   |   | Α | В | S | 0 | R | В | S |   |   |   |   |   |  |
|   |   |   |   |   |   | М |   |   |   |   |   |   |   |   |   | Т |   |   |   |   |   |  |
|   |   |   | T | _ | M | E | R | E | S | 0 | L | ٧ | E | D |   | E | P | 0 | X | Y |   |  |
|   |   |   |   |   |   |   |   |   |   |   | E |   |   |   |   | N |   |   |   |   |   |  |
|   |   |   | М | I | Т | 0 | С | Н | 0 | N | D | R | I | Α |   |   |   |   |   |   |   |  |