ALEXANDRA PALACE - STUDIO A — CAMERA SCRIPT

RECORDING NO: VTM/6LT/O.U.10056 — MONDAY 20TH JULY 1970

PROJECT NO: 00520/1110

OPEN UNIVERSITY SCIENCE COURSE UNIT 10

EXECUTIVE PRODUCER ..... NAT TAYLOR

DIRECTOR ..... BARRIE WHATLEY

ASSISTANT ..... SUSAN UNDERWOOD

DESIGNER ..... PAUL MUNTING

FLOOR MANAGER ..... PETER CHARLTON

T.M. ..... PETER MURRAY

SOUND SUPERVISOR ..... GRAHAM BEEBEE

VISION MIXER ..... RHODA CARSS

CAMERA CREW..... A.P.CREW

SEN.CAMERAMAN ..... GORDON BLOCKLEY

CO-ORDINATING PRODUCER .. JAMES McCLOY

--ooOoo--

TAKING PART

Professor M. J. Pentz
Dr. R. R. Hill

--ooOoo--

CAMERA REHEARSAL 1030-1300
LUNCH 1300-1400
CAMERA REHEARSAL 1400-1545
LINE-UP 1545-1615
RECORDING 1615-1715

TECHNICAL REQUIREMENTS

4 Cameras:

2 Pedestals with zooms
2 Pedestals with turrets

2 Booms

TELEJECTOR SLIDES

1. Science: A Foundation Course
2. Course Unit 10
3. Introduced by Professor Michael Pentz
4. (+) Glucose
5. (-) Glucose
6. The Speakers were: Professor M.J. Pentz
   Dr. R.R.Hill
7. Production by Barrie Whatley
   Executive Producer Nat Taylor
8. A Production for the Open University, BBC tv

CAPTIONS

No.	Shot	Description	Camera
1 7	7	Section of Periodic Table	4
	11		4
2.	9	BF_3	4
3.	13	$BcC1_2$	4
4.	15	PF_5SF_6	4
5.	17	PF_5	4
6.	19	SF_6	4
7.	27	(+) Glucose	4
8.	37	O.U. Symbol	4

F/U

1. 4 B

   VT CLOCK

2. TJ.1

   Science: A Foundation Course

3. TJ.2

   Course Unit 10

4. TJ.3

   Introduced by Professor Michael Pentz

ROOM 1

5. 3 A

   MS Pentz & Table

PENTZ: Introduce Programme and Dr. Hill.

6. 2 A

   MS Hill

HILL: Talks about structure of covalent compounds using balloons.

INTERCUTTING WITH

1 B } CUs Models
3 A }

(INTERCUTTING 1-2-3)

7. 4 A HILL (CONT'D):

Caption 1: Section of periodic table

8. 2 A

MS HILL

INTERCUTTING WITH

1 B)
) CUs Models
3 A)

END ON .....

SPLIT SCREEN WITH

9. 4 A

Caption 2: BF_3

10. 2 A

MS HILL

INTERCUTTING WITH

1 B)
) CUs Models
3 A)

END ON .....

SPLIT SCREEN WITH

11. 4 A

Caption 1: Section of Periodic Table (REPEAT)

(2 & Intercutting next)

(ON SPLIT SCREEN)
(4 and ...)

HILL (CONT'D):

12. 2 A

MS HILL

INTERCUTTING WITH

1 B)
) CUs Models
3 A)

END ON .....

SPLIT SCREEN
WITH

13. 4 A

Caption 3: $BcC1_2$

14. 2 A

MS Hill

INTERCUTTING WITH

1 B)
) CUs Models
3 A)

ENDS ON .....

SPLIT SCREEN
WITH

15. 4 A

Caption 4: PF_5SF_6

(2 AND Intercutting next)

(SPLIT SCREEN)
(4 and ....)

HILL (CONT'D):

16. 2 A

MS HILL

INTERCUTTING WITH

1 B)
) CUs Models
3 A)

ENDS ON ....

SPLIT SCREEN
WITH

17. 4 A

Caption 5: PF_5

18. 2 A

MS HILL

INTERCUTTING WITH

1 B)
) CUs Models
3 A)

ENDS ON 3 A

19. 4 A

Caption 6: SF_6

20. 3 A

MCU HILL

1 TO A
2 TO B

HILL: Winds up section with summary.

(2 NEXT)

(Shot 20 on 3)

/BOOM 1/

21. 2 B

MS PENTZ & BLOCK

/3 TO B/

INTERCUTTING WITH

1 A) CUs

END ON 2

PENTZ: No superimposability of L & R hands.

Tetrahedra -

Refers to complex molecule

22. 1 A

MS Model Molecule

23. 2 B

MS Pentz - Pan Right and Track when Pentz M moves.

Need to have simpler method to test chirality.

/MOVES TO CUP DEMONSTRATION/

24. 1 A

CU of Cups and mirror image

/2 TO D/

ZOOM OUT to MS Pentz and follow him to hat stand

/BOOM 2/

25. 2 D

MCU HILL

/1 TO C/

HILL: Importance of chirality at molecular level.

Holds up glucose framework. Shows plane of symmetry.

(1 NEXT)

(Shot 25 on 2)

26. 1 C

CU Glucose Molecule

HILL (CONT'D):

Shows glucose molecule

SPLIT SCREEN
WITH

27. 4 A

Caption 7: (+)glucose

o.o.v. : places (-) glucose in mirror image position.

28. 1 C

Zoom out to show both molecules

HILL: Refers to mirror image molecule.

29. 2 D

MS Hill & Table

Introduces polarimeter.

30. 1 C

CUs of parts of polarimeter

Assembles polarimeter.

31. 2 D

MS Hill & Polarimeter

Places 1) water in sample bath

2) glucose solution.

INTERCUTTING WITH

2 B) CUs of polarimeter window & dial

(1 NEXT)

(31 on 2)

HILL (CONT'D):

32. 1 C

CU of RH Glucose Model

S/I

TJ.4

(+) Glucose

T/O Slide

Because of the rotation this natural form of glucose is called (+) Glucose.

33. 2 D

MS Hill & Models

HILL: The mirror imate structure does not occur in nature and although it has been made in laboratories, it is a rarity, and and we were unable to obtain any. However, as could be predicted from present knowledge of chiral molecules the mirror image of (+) Glucose rotates p.p. light an equal amount, but in the negative direction. Thus this one -

34. 1 C

CU LH Glucose Model

S/I

TJ.5

(-) Glucose

T/O Slide

is called (-) Glucose.

(2 NEXT)

(Shot 34 on 1)

ZOOM OUT TO GIVE
CU of both molecules

HILL (CONT'D): The pair are called optical isomers because of this difference in interaction with plane polarised light.

35. 2 D

MS Hill

/1 TO D/

Why does only one form of a chiral compound usually occur in living organisms?

Chiral nature of enzymes.

Hand/Bag) Demonstration.
Hand/Glove)

crew/wood.

Bolt/nut.

Winds up.

36. 1 D

MS Pentz & Coffee Table.

INTERCUTTING WITH

2 D) Cus:
teaspoonful
glucose
molecular model
& template.

END ON : 2 D CU model

S/I

PENTZ: How was the first optical isomer formed and why was one preferred?

37. 4 A

OU Symbol

T/C 2

(CLOSING TJS NEXT)

(37 on 4)

S/I

38. TJ.6

The speakers were....

T/O slide

S/I

39. TJ.7

Production by.....

T/O Slide

S/I

40. TJ.8

A Production for.....

FADE SOUND & VISION

SCU
15.7.70