

PRE-MODERNITY

STARTING POINT

PHILADELPHIA '70

B. CHANCE



where $v^* \neq v$

HOW ?

SAN FRANCISCO '70 – QUANTUM BIOLOGY

R. ROSEN

P. LÖWDIN

FROM electronic transitions TO molecular activations

FILTERED LIGHT – Interference filters $\lambda=540$ nm up to 10^3 Lx

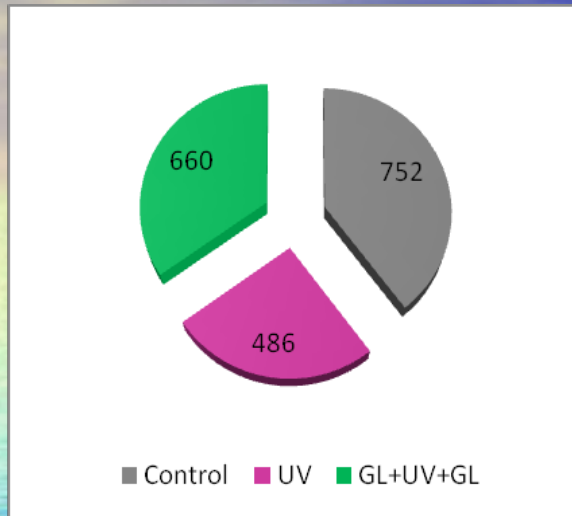
MODERNITY

CELLS + ALTERNATIVE

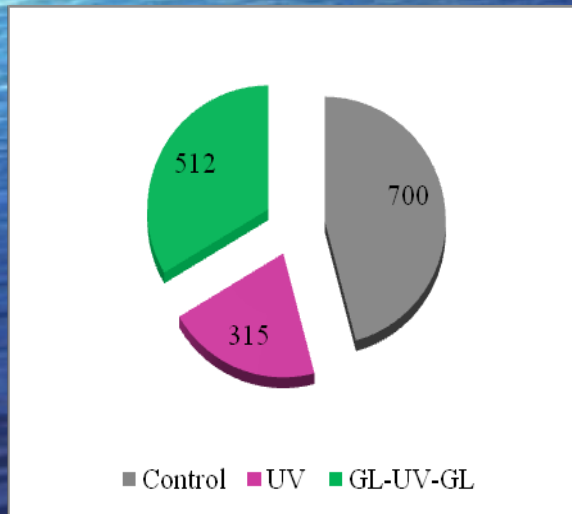
GREEN LIGHT

SOURCES

Protective Green Light Effect on cell viability under UV irradiation

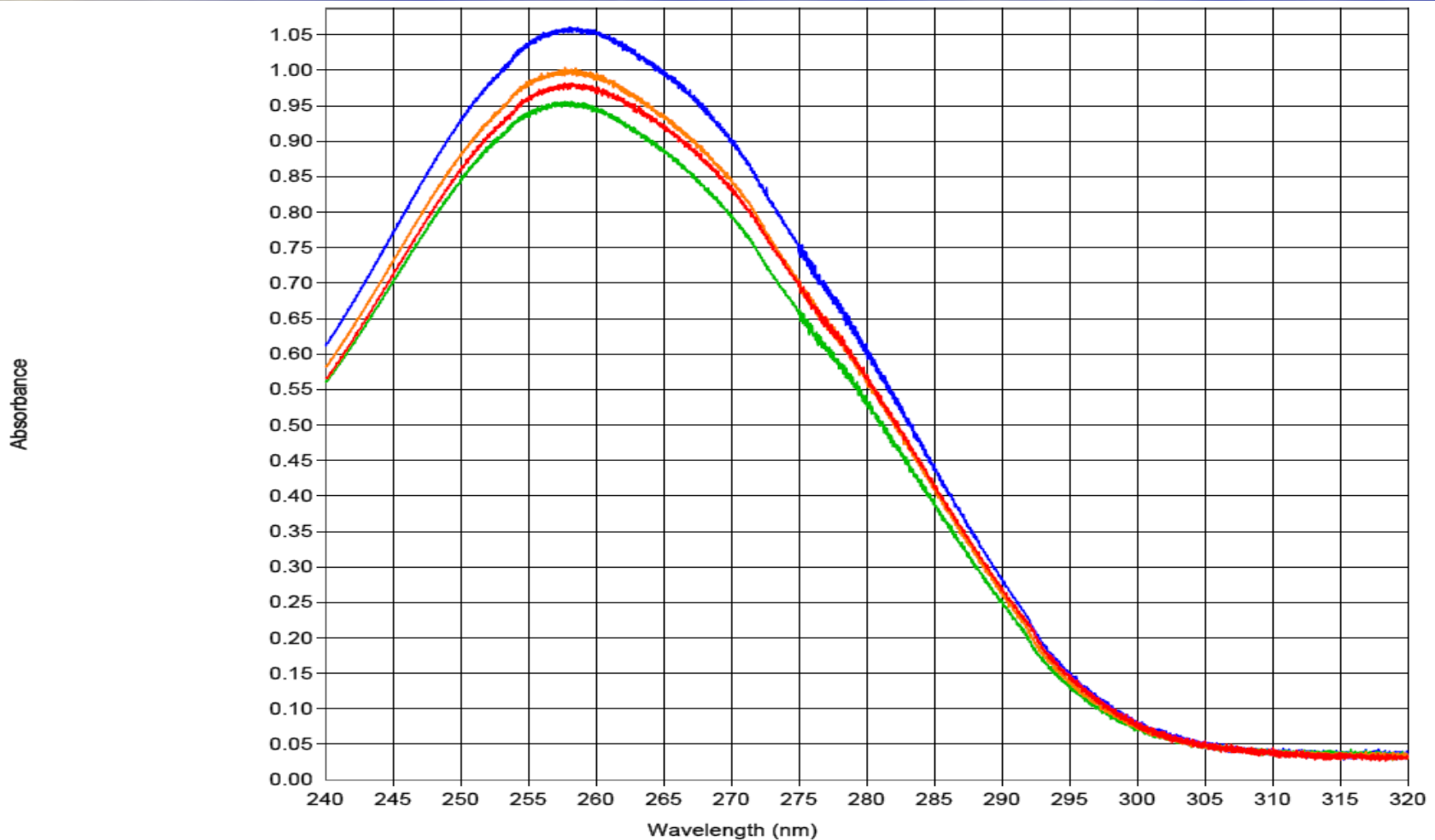


a: Experimental set-up: $22.0 \text{ J.m}^{-2}\text{sec}^{-1}$ UV-irradiation. Green light $\lambda = 546\text{nm}$ applied 24h before and 24h after UV-irradiation. Each experiment performed with five separate standardized cellular samples; viability determined by neutral red colorimetric method.



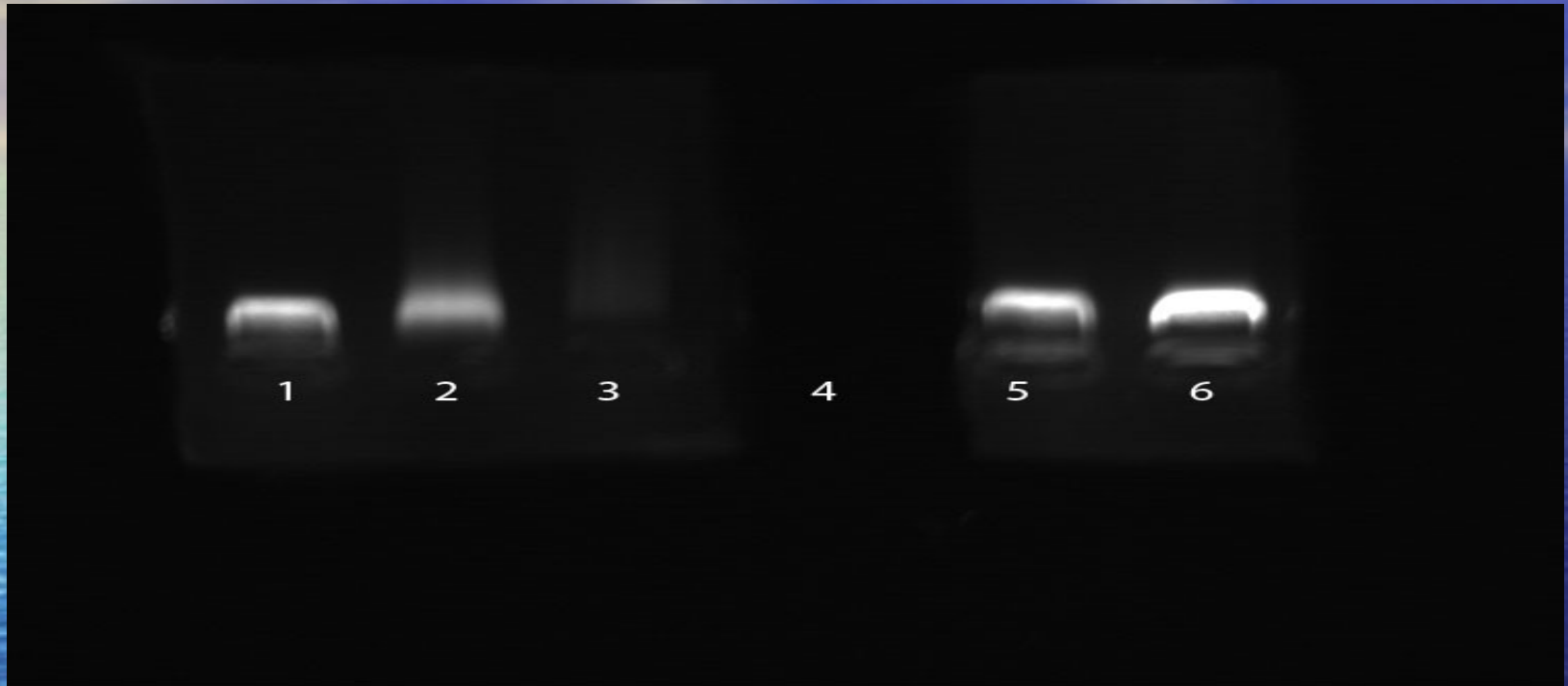
b: Experimental set-up: $11.0 \text{ J.m}^{-2}\text{sec}^{-1}$ UV-irradiation. Green light $\lambda = 546\text{nm}$ applied 24h before and 24h after UV-irradiation. Each experiment performed with five separate standardized cellular samples; viability determined by neutral red colorimetric method.

UV spectra of DNA samples UV-irradiated and of DNA samples UV irradiated and simultaneously protected by GL.



Name	Wavelength Range (nm)	Scan Speed (nm/min)	Step Size (nm)	Slit Width (nm)
1. DNA - 60 min GL.scan	319.99 - 240.00	100.00	0.04	1.50
4. DNA - 15 min UV.scan	319.99 - 240.00	100.00	0.04	1.50
2. DNA - Control.scan	319.99 - 240.00	100.00	0.04	1.50
3. DNA - 60 min GL + 15 min simultaneously UV+GL.scan	319.99 - 240.00	100.00	0.04	1.50

Gel Electrophoresis of DNA samples, UV-irradiated and GL-protected



1-Control;

2- UV 40 min simultaneously with GL 40 min.;

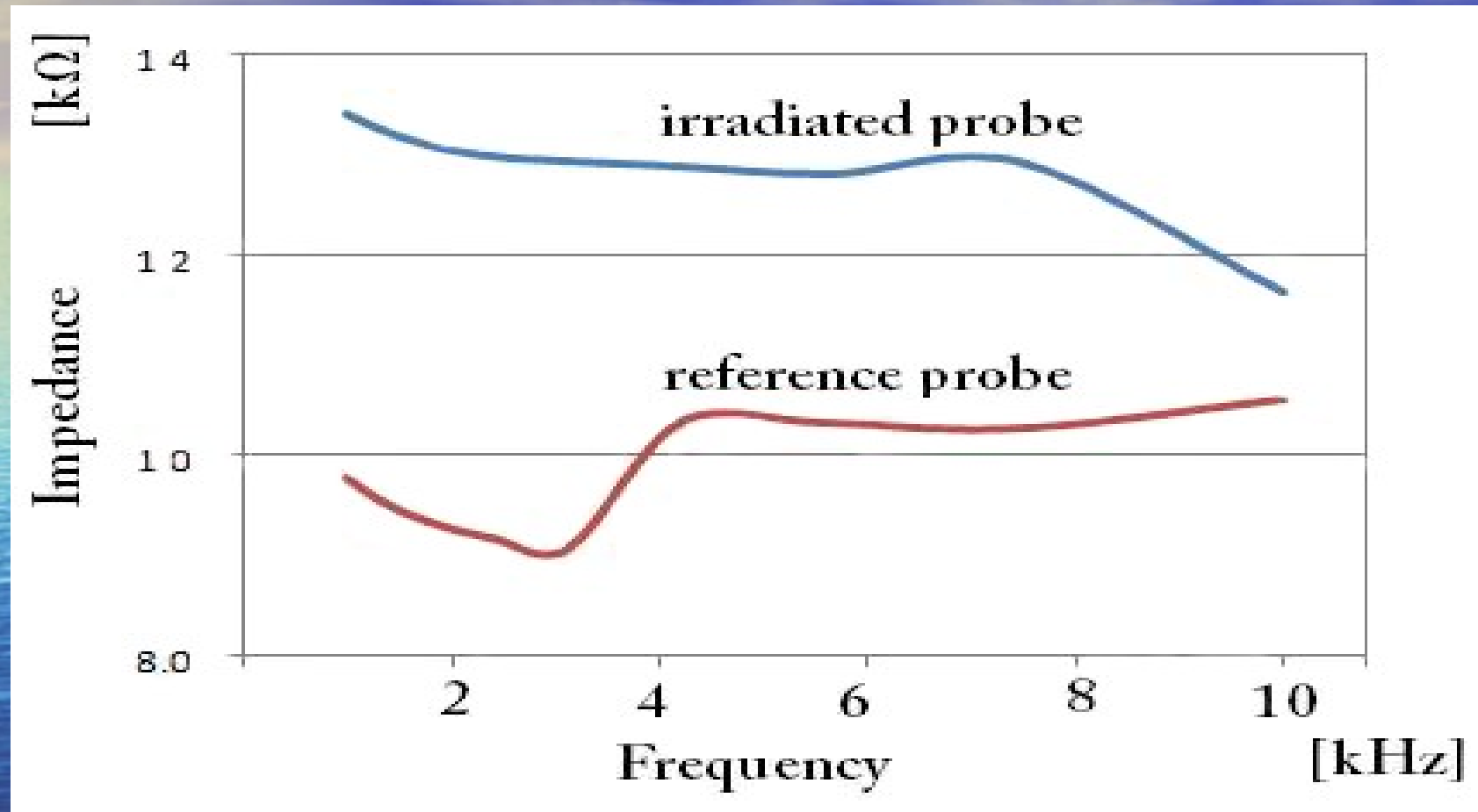
3- UV 40 min.;

4- UV 50 min.;

5- UV 50 min. simultaneously with GL 50 min.;

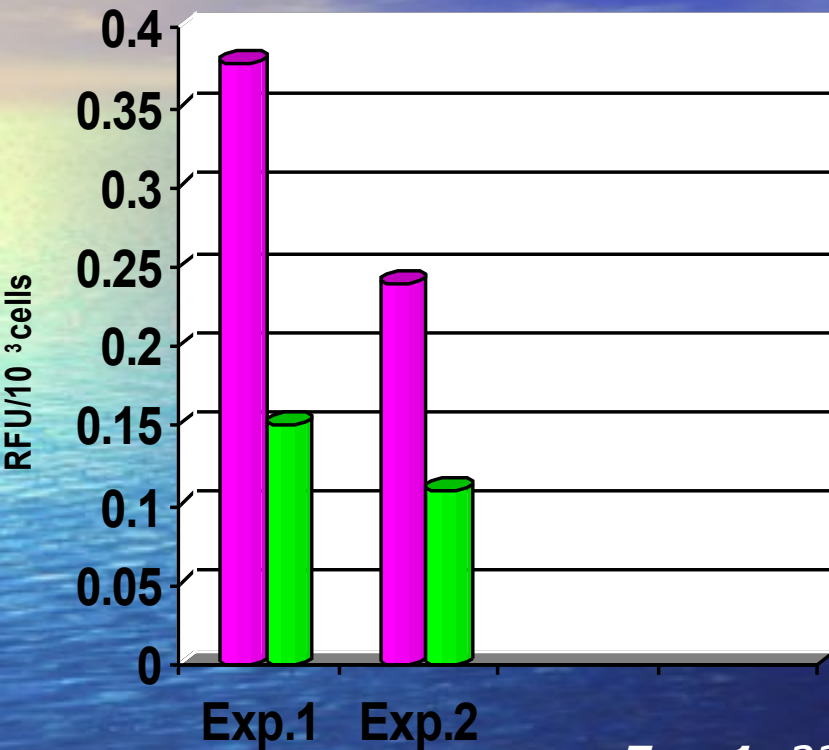
6- GL 50 min.

Impedance spectrum of a DNA probe GL-irradiated



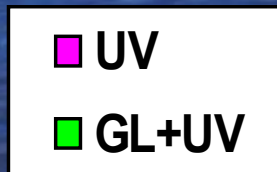
The DNA probe, 70 μ l of a 1% DNA in 0.9% NaCl is GL irradiated for 30 min., in a miniaturized irradiation cell, with an intensity of $3 \cdot 10^5$ Lx. Volumes of 45 μ l are used in the impedance measurements.

A conjecture: anti oxidant property of GL
UV → Free Radicals + Green Light (scavenger)



Relative fluorescence yields, determined by DCFDA-probe, in culture cells irradiated with UV and protected by GL.

Results represent averages computed from the yields of reactive species generated in five different culture samples UV-irradiated, and the yields of reactive species generated in five different culture samples UV-irradiated and GL-protected.



Exp.1- $22.0 \text{ J.m}^{-2}\text{sec}^{-1}$

3 min. exposure

UV=0.380±0.04

GL+UV=0.151±0.06

Exp.2- $11.0 \text{ J.m}^{-2}\text{sec}^{-1}$

3 min. exposure

UV=0.240±0.03

GL+UV=0.109±0.05

Efectul luminii verzi asupra generarii de radicali liberi la descompunerea termica a parafinei

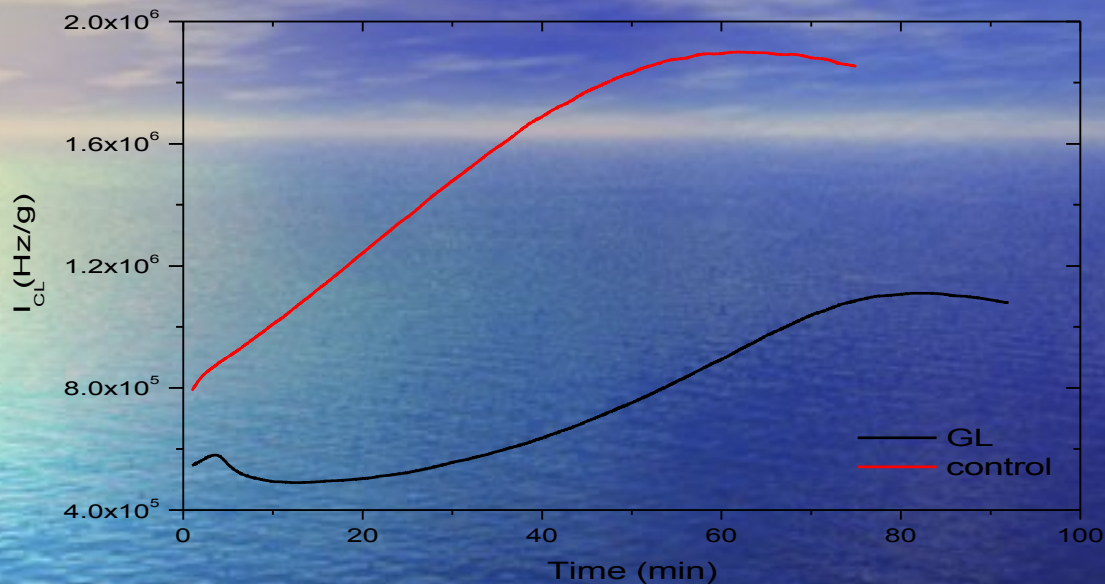
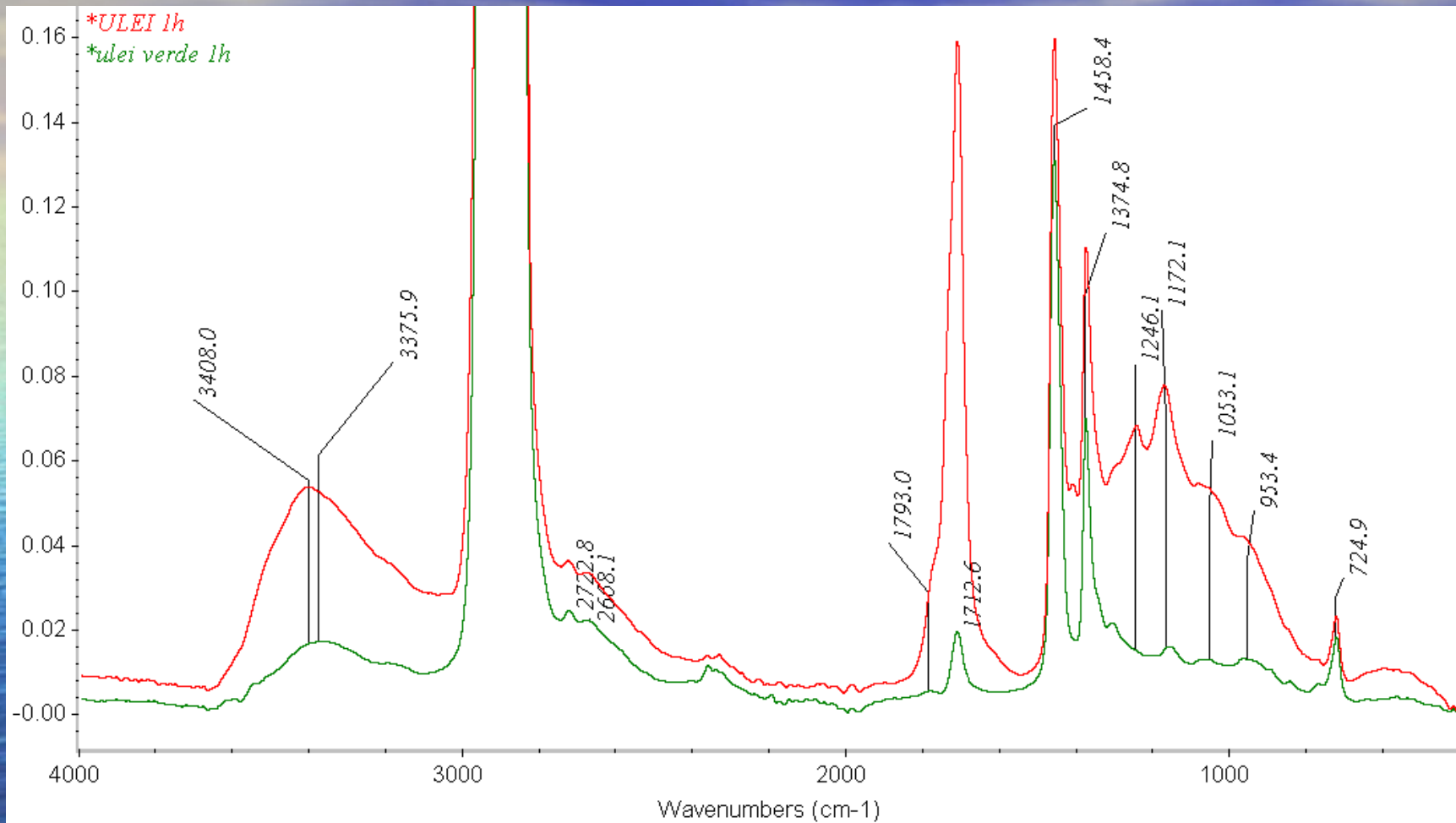


Fig. 1 – Curbele de CL izoterma (160 °C, aer) pentru parafina

Nr.crt	T_i (min)	$T_{1/2}$ (min)	T_{max} (min)	I_o (Hz/g)	I_{max} (Hz/g)	V_{ox}^{max} (Hz/gmin)
Control	1	24	62	$0,79 \times 10^6$	$1,9 \times 10^6$	$0,22 \times 10^5$
Proba	32	53	83	$0,48 \times 10^6$	$1,1 \times 10^6$	$1,01 \times 10^5$

Tabelul 1 – Parametri de CL pentru parafina (160 °C, aer)

ULEIUL DE PARAFINA



Spectrul IR al uleiului de parafina incalzit la 175 °C (control) si al uleiului de parafina incalzit la 175 °C sub lumina verde.

Water..water..water....everywhere

The very last thing a deep-sea fish would discover
is water.

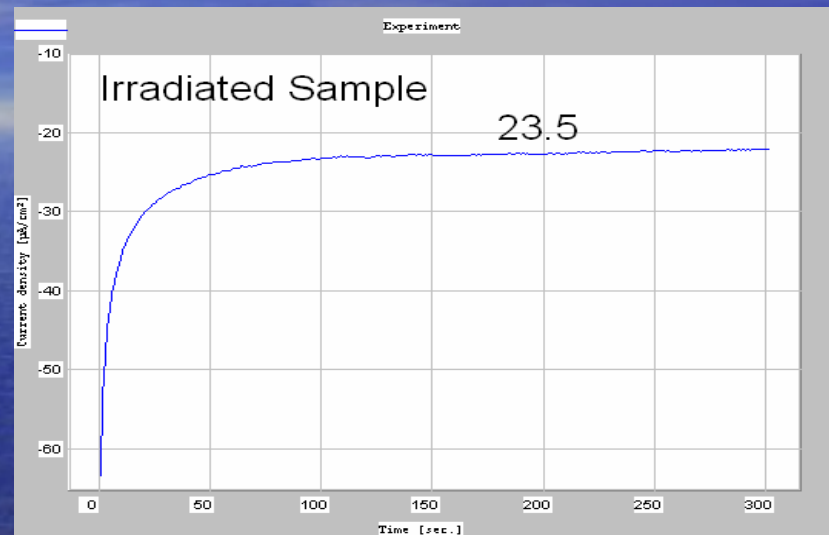
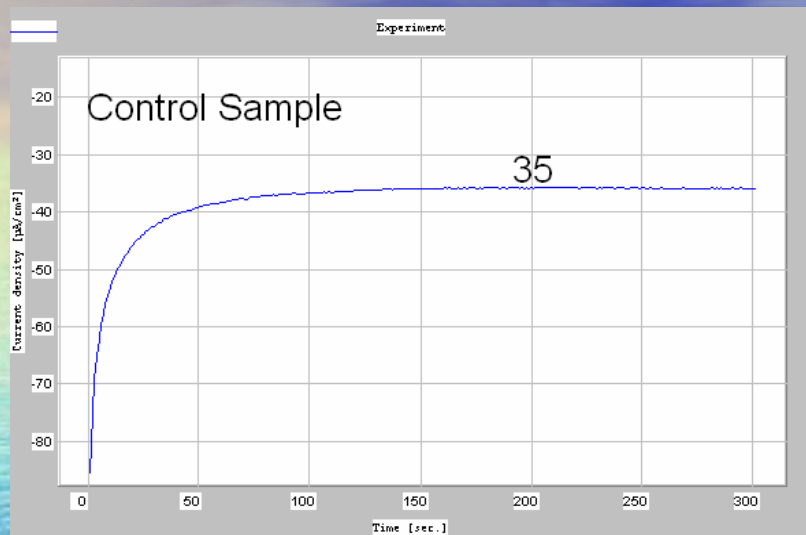
Oliver Lodge

The effect of GL-irradiations on the permeability of hypotonic NaCl solutions through erythrocytes membrane.

<i>Irradiation times (min.)</i>	<i>Controls, AU_{550 nm} ± SD</i>	<i>GL-Irradiated, AU_{550 nm} ± SD</i>
15	0.225 ± 0.040	0.181 ± 0.031
30	0.228 ± 0.021	0.180 ± 0.039
45	0.321 ± 0.052	0.246 ± 0.021
60	0.246 ± 0.035	0.158 ± 0.039

The results represent values of the hemoglobin leaked from the disrupted erythrocytes and checked spectrophotometrically at 550 nm. For each irradiation time experiment, numbers represent the average of 20 individual determinations.

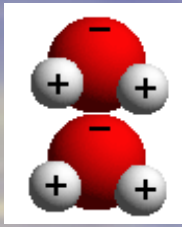
Current recording (μA) of a 0.9% NaCl solution, 60 min. GL-irradiation, as compared with the non-irradiated control.



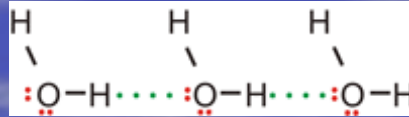
Values represented at 200 sec. of recording. Chronoamperometry at a fixed potential of 300 mV vs. Saturated Calomel Electrode.

*Computed Ionic Mobility
 $+u)(\text{m}\cdot\text{S}^{-1}/\text{V})\cdot 10^{-8}$
Control: 6.804 ± 1.17*

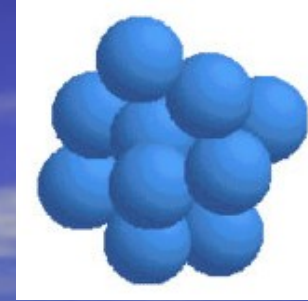
*Computed Ionic Mobility (u^+
 $(u^+ + u)(\text{m}\cdot\text{S}^{-1}/\text{V})\cdot 10^{-8}$
GL-irradiated: 4.085 ± 1.20*



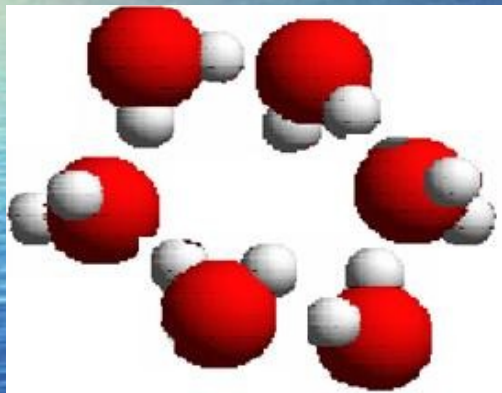
A. Water polar attraction



B. Hydrogen bridges

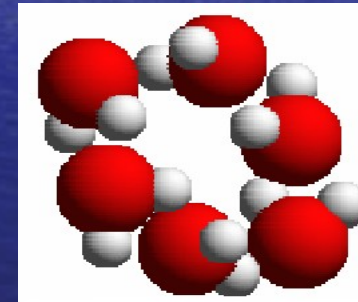
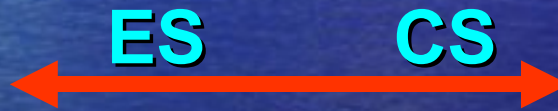


C. Water clusters



Water clusters expanded structure

(ES)



Water clusters collapsed structure

(CS)

POST-MODERNITY

ZECE rezultate experimentale *EXOTICE*

in

CAUTAREA

unei

TEORII CANONICE