Florinel-Gabriel Bănică: ***Chemical Sensors and Biosensors-Fundamentals and Applications*****, Wiley, 2012 (1st print)**

ERRATA

Front matter

Page	*Line*	*Original text*	*Corrected text*
xxxii	7 from the bottom	SHS	SHE

Chapter 01

Page	*Paragraph/Line*	*Original text*	*Corrected text*
3	3/2	site	interaction
4	Sec 1.2.5/line 1	various	various applications
11	Sec 1.7/line 7	cross-selective	cross-sensitive
11	Sec 1.7.1/line 5	cross-selective	cross-sensitive
11	Eq. 1.19/last line	a_{21}	a_{n1}
		a_{22}	a_{n2}
15	3/1	medial	medical
16	1/4	insulin	glucose

Chapter 02

Page	*Paragraph/Line*	*Original text*	*Corrected text*
21	4/1	acids	acid
21	Sec 2.1/par 2/line 2	acid	acids
21	Last par/line 1	-SH	$-CH_2$-SH

Chapter 03

Page	*Paragraph/Line*	*Original text*	*Corrected text*
30	Sec 3.3/par 3/line 1	group of	group in
34	Table 3.4/column 1	Line 2 (EC 1.1.1.1)- to be moved upward just below the first line	
42	Line 3 from the bottom	an optimum	the optimum
43	Eq. 3:30	A	*A*
45	Line 3 below Eq. 3.36	3.7.1	3.6.1
45	Line 1 above Eq. 3.37	indicated	indicated by
47	1/1	[12]	[18,38,39]
47	1/1	[19,39]	*Delete*

Chapter 04

Page	*Paragraph/Line*	*Original text*	*Corrected text*
50	5/3	rates for	rates of
51	1/3	negligible	is negligible
55	Eq. (4.22), right-hand member, denominator	k_{Sm}	$k_{m,S}$
58	Par 4/line 4	drgradation	degradation
59	Eq. (4.33), left-hand term	p_e	$p_{e,0}$
61	Line 1 above Eq. 4:39	as in the solution follows	in the solution, as follows
63	Eq. 4.47, right hand term/ subscripts to D	Sm	S,m
		Se	S,e
63	Line 2 below Eq. 4:48	internal or	internal and

Chapter 05

Page	*Paragraph/Line*	*Original text*	*Corrected text*
69	Sec 5.3.2/line 3	has preserves	preserves
71	Line 6 from the bottom	mother liquor	reaction mixture
73	Sec 5.4.7/ line 2	sp_2	sp^2
76	3/3	assembled	is assembled
78	Question 2	or Protein A	*Delete*
79	2/1	mother liquor	reaction mixture
84	Sec 5.8.1/par 2/line 5	present	are present
90	Sec 5.12.1/ par 4/ line 3	polymersolution	polymer solution

Chapter 06

Page	*Paragraph/Line*	*Original text*	*Corrected text*
101	Sec 6.1/ line 6	reactant	reactants
102	Line 8 before Fig. 6.2	antigens	antigen
102	2/1	two	to
103	Eq. 6.1	Ab Ag	Ab:Ag
103	Line 2 from the bottom	as receptor	as a receptor
105	Sec 6.2.6/line 4	the incubated	then incubated
106	Sec 6.3/line 1	covalent methods	covalent binding
106	Sec 6.3, par 5/line 2	affinity	affinity interaction
108	Eq. 6.10/ 3rd term/ denominator	a_*r	a^*r
108	Eq. 6.12/ denominator	$(a^*0)^{-1}$	$(a^*)^{-1}$
109	Line 3 from the bottom	peptides[18–20]	peptides [18–20]
115	Sec 6.8 /line 4	also in food	food
115	Question 1	an the	an
115	Question 7/line 3	I working	working
115	Question 16/line 1	obtained	obtained?

Chapter 07

Page	*Paragraph/Line*	*Original text*	*Corrected text*
118	Sec 7.1/ line 6	canon	canonical
119	Fig. 7.1/caption/ line 1	Natural	Canonical
120	Fig. 7.3/caption/line 1	identical	antiparallel
120	Fig. 7.3/caption/ line 3	(S-P) backbones	backbones
121	Fig. 7.4/caption	Mechanism of transfer	Pathways in the
121	2/2	sequence of nucleic acids (or more exactly the sequence of bases)	sequence of bases in a nucleic acid
122	1/3	a higher melting temperature than	a higher melting temperature compared with than
122	3/1	noncanon	non-canonical
122	3/2	trivial	common
122	3/2	canon	canonical
123	3/1	T_m	T_m
123	3/2	T_m and T_m	T_m and T_m
124	6/3	nucleic	double-strand nucleic
131	1/5	takes 1–3 min	takes only 1–3 min
132	1/3	nonspecific bonding targets	the non-specifically bound target

Chapter 08

Page	*Paragraph/Line*	*Original text*	*Corrected text*
135	6/1	assembly of	assembling
135	3/7	area	high area
139	1/lines 1-2	of graphitic carbon	*Delete*
139	2/1	materials	nanomaterials
140	Fig. 8.6/ caption/line 1	cell for	cell of
140	Sec 8.3.2/ penultimate line	colate	cholate
140	Sec 8.3.2/last line	synthetic or biopolymers	synthetic- or bio-polymers
145	Sec 8.5/line 4	in applications	*Delete*
145	Sec 8.5/line 7	excellent	useful
146	2/6	domains	these domains
147	1/3	*magnetoresisitive*	*magnetoresistive*
147	3/2	is attached	was previously attached
148	3/4	in the detection of	for detecting
149	Sec 8.6.1/line 1	easily prepared	prepared from organometallic precursors
150	3/2	-OH'	-OH
150	Eq. 8.4	CdTe QD	CdTe (QD)
152	1/2	8.16C and D	8.16
152	Sec 8.8.1/line 5	ion	in

Chapter 09

Page	*Paragraph/Line*	*Original text*	*Corrected text*
162	Fig. 9.8/caption	configuration	configuration of a
163	1/1	probe-s	probes
163	5/6	alleviates	alleviate
163	3/4	crossreactive	cross-selective
163	5/6	crossreactive	cross-selective

Chapter 10

Page	*Paragraph/Line*	*Original text*	*Corrected text*
165	2/6	specifically	selectively
165	3/8	basis in	basis for
165	4/1	material	materials
169	1/1	10:18	10.18
172	Sec 10.3.2/line 3	an opposite	a similar
172	Sec 10.3.2/line 5	opposite	a similar
174	Line 1 below Eq. 10.32	internal solution and the test solution	test solution and the internal solution
177	Sec 10.4.3/line 2	dynamic	response
178	Question 5/line 2	variation of the junction potential.)	variation in the junction potential.
182	Sec 10.6.2/line 7	unhindered	not hindered
182	Sec 10.6.2/ par 2/line 3	membrane)	membrane
183	Line 2 below Eq 10.63	as long if	if
183	Sec 10.6.3/par 3/line 1	material	membrane
184	Sec 10.7/para 2/line 4	can come	come
185	Par 3/line 3	complex ion	ion
186	Line 1 below scheme 10.66	hydrophilicity	the hydrophobic character
186	Line 1 below scheme 10.66	organic	non-polar
186	Eq. 10.69	u_N/u_M	u_N/u_M
186	Eq. 10.69	K_{exch}	K_{exch}^{-1}
187	Eq. 10.70	K_{exch}	K_{exch}^{-1}
189	Table 10.4/ columns 3 and 4		*No interval between lines 2 and 3 (see the right form below)*
191	Line 1 above Eq. 10:77	concentration	free-state concentration
191	Line 4 below Eq. 10:79	limit	upper limit
191	Eq. 10.77/ denominator	$K_{p,M}$	$K_{p,N}$
191	Line 1 below Eq. 10.79	$K_{M,N}$	$(K_{M,N})^{-1}$
193	5/3	in	at
195	1/2	ion dipole	ion-dipole
195	3/2	element	factor
197	1/5	and this	that
201	Line 1 below Eq. 10:83	the standard	a single standard
205	reaction 10:89/right hand term	solid	YSZ
205	1/6	yttrium	yttria

206	Line 3 above Sec 10.17.3 heading	A planar	A planar configuration
207	Sec 10.17.4/line 8	hexahydrate	tetrahydrate
208	Heading (iii)/line 2	or sensing	sensing

Chapter 10/p.189/ Table10.4: right format

	Hard	Borderline	Soft
Acids	H^+, Li^+, Na^+, K^+, Mg^{2+}, Ca^{2+}, Al^{3+}, Cr^{3+}, Co^{3+}, Fe^{3+}	Fe^{2+}, Co^{2+}, Ni^{2+}, ,Cu^{2+}, Zn^{2+}, Pb^{2+}	Cu^+, Ag^+, Cd^{2+}, Hg^+, Hg^{2+}
Bases	F^-, CH_3-COO^-, PO_4^{3-}, SO_4^{2-}, Cl^-, CO_3^{2-}, ClO_4^-, NO_3^-, NH_3, RNH_2	Br^-, NO_2^-, SO_3^{2-} Aniline, pyridine, R-NH-R	R_2S, R-SH, R_3P, $(H_3CO)_3P$ I^-, SCN^-, CN^-

Chapter 11

Page	*Paragraph/Line*	*Original text*	*Should read*
222	2/8	The situations change	The situation changes
224	Sec 11.1.5/line 6	bay	by
226	Sec 11.2.2/line 5	the silanol	a silanol
227	Line 5 below Eq. 11:16	solution	solution from
228	Sec 11.2.2/ penultimate line	sensor for *in vivo* applications	sensor suitable for *in vivo* applications
228	1/2	Equation (11.19)	Equation s (11.16) and (11.19)
228	Sec 11.2.3/line 8	fastened silicone rubber	fastened with silicone rubber
232	Sec 11.2.7/line 6	amount	the amount
231	2/2	allows	allows for
233	2/8	a LAPS	multiple LAPSs
234	1/1	of the functioning	in the functioning
234	1/3	pertinent	*Delete*
235	Sec 11.3.2/line 3	operated a	operated at a
235	Sec 11.3.2/line 6	and can be	and the sensor can be
237	1/2	polar molecules	polar molecule compounds
237	3/1	have been already introduced	have already been introduced
237	Line 5 above Sec 11.3.4 heading	gases of	gases in
238	Fig. 11.22-caption/line 2	A	(A)
238	Line 3 above Eq. 11:32	matrix	semiconductor
239	Last line above Sec 11.3.6	Figure 11.23B	Figure 11.22B
239	3/6	Pd insulator	Pd/insulator
239	Line 1 above Sec 11.3.6 heading	Figure 11.23B	Figure 11.22B
239	Line 7 from the bottom	has been also	has also been
240	Question Nr. 1	a MIS devices	a MIS device
240	Question Nr. 2	element	element?
240	Question Nr. 5	alternatives this	alternatives to this
241	Eq. 11.36	Φ_F	Φ_b
241	Line 3 from the bottom	gap of the	gap of
242	Fig. 11.26/caption/line 1	the device characteristics	the characteristics of a CNFET sensor
243	2/3	devices	devices and

Chapter 12

Page	*Paragraph/Line*	*Original text*	*Corrected text*
248	Sec 12.1.4/par 2/line 7	the production of	manufacturing
249	Sec 12.1.5/par 2/last line	to a flame	to the flame
250	1/2	sensitive heated region.	sensitive region.
250	Sec 12.1.7/line 4	area	region
251	5/5	oxide	oxide grains
252	1/1	carbon-black–polymer	polymer-carbon black
252	Last text line	alter of	alter
253	Question 3	semiconducting	conducting
253	Sec 12.3/line 6	recoveries	recovery
254	Sec 12.4/line 1	in array	in the array
255	Sec 12.5/line 2	gas	of gas
256	Last par/line 3	crossreactive	cross-selective

Chapter 13

Page	*Paragraph/Line*	*Original text*	*Corrected text*
258	5/3	allows rational selection	allows for rational selection of
259	Eq. 13:2	$-V-E_r+R_si$	$V+E_r-R_si$
260	Line 1 below Eq. 13.13	the redox	a redox
260	Line 2 above Eq. 13:5	Faraday's law	Faraday's laws
262	Line 2 below Eq. 13:17	determination	determinations
263	Line 2 from the bottom	symbols ">>" and ">>"	symbols ">>" and "<<"
263	Line 1 from the bottom	$E_{1/2}$ – 0.2 V	($E_{1/2}$ – 0.2) V
264	3/1	a cathodic	an anodic
265	Line 2 from the bottom	the reactant	any reactant
266	Question 1	law	laws
268	Sec 13.5.1/line 2	Faraday's Law	Faraday's laws
269	Line 1 below Eq. 13.37	capacitance	charge
270	Line 4 below Eq. 13:40	$v_{e;c}$ and $v_{e;a}$	$v_{e,c}$ and $v_{e,a}$
272	2/2	constant	parameter
272	Line 1 below Eq. 13:51	$\boldsymbol{A}$	$\mathcal{A}$
272	Sec 13.6.2/line 1	Faraday's law	Faraday's laws
273	Line 3 below Eq. (13.64)	Eq. (13.64)	Eq. (13.63)
274	3/5	termed	termed as
274	Sec 13.6.4/line 1	in at	at
276	1/1	very	a very
276	Eq. 13.78/left hand term	R_{ct}	R_{et}
278	6/1	directed at	directed to
278	Sec 13.6.8/ par 3/ line 2	over	above
279	Exercise 13/line 1	0. (b).	0; (b)
279	Exercise 13/line 1	tables A and B	table
279	Exercise 13/line 7	(c)	(e)
280	Line 1 above Eq. 13:81	$t^{1/2}$	time (t)
281	Eq. (13.83), lower index to integral symbol	t_s	t_d
286	Sec 13.7.6/par 2/ line 1	Figure 13.19,	Figure 13.19.

287	Sec 13.7.7/ line 1	Differeces in	Differences between
288	Line 1 above Sec 13.7.8 heading	higher	less satisfactory
290	Fig. 13.23/caption	(10mm diameter gold UME)	a 10 mm diameter gold UME
291	par 3/last two lines	diffusion (1) and that of spherical diffusion (3)	diffusion (curve 1) and that of spherical diffusion (curve 3)
294	Line 2 from the bottom	metals	metals,
298	Sec 13.8.5/par 9/line 4	neutral	a neutral
298	Sec 13.8.6/line 3	material in	material for
300	Sec 13.9.2/ line 4	E_{ox}	E_O
300	Sec 13.9.2/ line 4	E_{red}	E_R
300	Fig. 13.30/caption	M_R/M_R	M_O/M_R
301	1/2	influence	any influence
301	3/2	reaction	reactions
301	Fig. 13.32/caption/line 2	compound	couple
302	Fig. 13.32/caption	redox compound	redox couple
304	1/2	peroxide that	peroxide
304	Sec 13.9.6/line 3	are cannot	cannot
306	Question 15	activity.	activity?
309	Sec 13.10.4/ para 3/line 3	electrode	electrodes
309	Sec 13.10.5/line 4	ration	ratio

Chapter 14

Page	*Line*	*Original text*	*Corrected text*
316	1st line below Eq. 14.4	from the enzyme active site (E_O) to	to the enzyme active site (E_O) from
317	2nd Par/line 8	reversibe	reversible
317	Sec 14.2.2/para2 /line 1	$Fe_2O_3MnO_2$, SnO_2	Fe_2O_3, MnO_2, and SnO_2
317	last Par/ line 3	Familiar	Typical
323	par 3/ 1st line	agent	acid
323	Line 1 from the bottom	material	matrix
325	Sec 14.5.2 para1 /line 5	allows the	allows for
325	Sec 14.5.2/line 2 from the bottom	sensor	fuel-cell
326	Sec 14.5.3/line 6	his	this
328	Sec 14.7/ par 2/ line 8	molecular compounds	low molecular weight compounds

Chapter 15

Page	*Paragraph/Line*	*Original text*	*Corrected text*
332	Line 2 from the bottom	E_OS	E_OS
333	Line 4 below Eq. 15:6	rate	rate (v)
334	Line 5 below Eq. (15.16)	f	f_O
338	Question 1	approaches unity	tends to one
		E^0 + 0.118	(E^0 + 0.118)
338	Exercise 4/line 2	within	between
339	Exercise 5/line 1	5 (a)	5
341	1/1	the revealing of	revealing
342	2/2	occurring	included
344	1/4	midreaction	middle
	2/2	unity	equal to one
	Eq. 15:59/left-hand term	$\boldsymbol{v}$	v

Chapter 16

Page	*Paragraph/Line*	*Original text*	*Corrected text*
347	2/2	bonds	interactions
	Sec 16.1.2/line 6	recycling	recycling of
	Sec 16.1.2/line 9	analyte	analyte-analogue
348	Fig. 16.1/caption/line 1	Sensor	Transduction
348	Fig. 16.2/caption/line 1	a competitive	the competitive
350	Fig. 16.5/caption	sandwich	sandwich format
350	Sec 16.1.4/line 4	tertiary	ternary
350	1/1	assay	format
353	6/1	stability	stability of the sensor
354	Sec 16.2/line 5	contributing	from contributing
355	Fig. 16.13/caption	$-2e^-;2H^+$	*Delete*
356	Fig. 16.15/caption/line 2	of sensor	of the sensor
357	Sec 16.2.3/line 3	ferrocenyl	namely, ferrocenyl
358	Fig. 16.17/caption/ last two lines	[29]. Copyright 1999 American Chemical Society.	[34]. Copyright 1997 Elsevier.
358	1/4	flowing	to flow
360	3/2	negatively	positively
360	2/10	ATTCGACAGGGATAGTTCGA	TCGAACTATCCCTGTCGAAT
360	2/6	target	probe
360	2/10	biotin	avidin
361	Sec 16.2.7/par 2/line 1	The commercially available ElectraSense1	A commercially available microarray
362	Sec 16.2.9.1/line 3	electrode attached	electrode-attached
362	Sec 16.2.9.1/penultimate line	protein	molecule
363	Sec 16.2.10/line 6	double-strand	target-probe
365	ref 52		Ghindilis, A. L., Smith, M. W., Schwarzkopf, K. R., *et al.*, A. (2007) CombiMatrix oligonucleotide arrays: Genotyping and gene expression assays employing electrochemical detection. *Biosens. Bioelectron.*, 22, 1853-1860.

Chapter 17

Page	*Paragraph/Line*	*Original text*	*Corrected text*
369	Line 1 below Eq. (17.12)	siemen	siemens
370	5/3	components characteristic to	characteristic components of
370	5/5	very	*Delete*
371	2/5	confounded	confused
371	3/last line	capacitor current	the current
372	2/3	(Figure 17.3C)	(CPE, Figure 17.3C)
	Sec 17.2.3/par 2/ line 3	R_{et}	R_{et}
373	Fig. 17.5/ caption/line 1	with self	with a self
375	Par 2/line 5	logarithm	logarithm of
376	Line 1above 17.3.2 heading	these	each of these
378	Line 6 from the bottom	low	high
379	Sec 17.3.5/line 6	of a gold layer coated with self-assembled octadecanethiol.	the bare gold electrode.
379	Sec 17.3.5/line 12	without calixarene	coated only with thioalkane
380	Fig. 17.14/Caption/line 3	phospholipid	a mixed phospholipid -calixarene
380	Sec 17.3.6/line 2	molecules	compounds
382	Sec 17.5/line 6	and it	and
382	Question 11	Answer: Z_{dl}	Answer: for 1 kH, Z_{dl}
386	Question 2	assessment	monitoring
386	Eq. 17.26	$1/A$	l/A
386	Line 1 below Eq. 17:27	conductance	the conductance
387	3/l3	conductance	conductivity
388	2/1	each	each ion
389	Sec 17.7.4/line 3	participate in	contribute to
391	4/1	pH	pH sensor
393	line 5 from the bottom	I_2	iodine
395	Question 8	kind of enzyme is	kinds of enzyme are
396	Sec 17.8.2/par 4/line 1	multilayers (a	multilayers (at
397	7/4	the layer	measure the layer

Chapter 18

Page	*Paragraph/Line*	*Original text*	*Corrected text*
404	6/1	(e.g., [2]	(e.g., [2])
405	Par 3/last 2 lines	Common light sources are lasers, including light-emitting diodes that are small, semiconductor lasers.	Common light sources are lasers and light-emitting diodes.
407	2/2	than the numerical aperture	than that corresponding to the numerical aperture
407	Sec 18.2.2/line 1	One possible	A possible
408	1/4	proximity with	proximity of
410	Line 3 above Sec 18.3.2	is not	cannot
411	sect, 18.3.3/line 2	energy	electronic
414	2/1	very	a very
414	4/1	organic	biological
416	1/1	face	edge
417	Sec 18.39/line 2	L_{ox}	L_{red}
418	Line 1 above Eq. 18:23	HPR	HRP
418	5/3	firefy	firefly
418	5/4	cosubstrates	a cosubstrate
421	Question 22/line 1	Drawaschemeofanoxidase-basedenzymaticsensorthatuseslu minolforchemiluminescencetrans duction.	Draw a scheme of an oxidase-based enzymatic sensor that uses chemiluminescence transduction.
421	Line 2 from the bottom	B	R
424	Line 6 from the bottom	in different polymer matrices	in a particular polymer matrix
426	4/1	can be also	can also be
430	Sec 18.7.1/par 2/line 3	waveguide	waveguide edge
431	2/1	Silicon	Fused silica
431	2/1	silicon	this material
430	Eq. 18:46/numerator	Q	*Q*
432	3/2	weak	tiny
432	Fig. 18.30/ caption/line 1	over	greater than

Chapter 19

Page	*Paragraph/ Line*	*Original text*	*Corrected text*
435	Line 1 below Eq. 19.1	[In^-]	In^-
435	Line 2 below Eq. 19.1	each	one of
438	Sec 10.2.1/par 2/line 8	alkaline	alkali
440	3/1	of mechanical	to mechanical
441	Fig 19.6/caption	oxygen	oxygen sensors
441	2/5	the following response function	well the experimental data
441	Question 3/line 1	review	review of
443	Sec 19.4.3/par 2/line 3	reaction	reaction.
443	Sec 19.4.3/par 2/line 4	($FMNH_2$),	($FMNH_2$).
444	1/1	gases	certain gases
444	1/1	ammonia	ammonia and carbon dioxide
444	Fig. 19.10/below left hand chemical formula	Cy	Cy3
444	Fig. 19.10/chemical formulas		In each chemical formula, the right side nitrogen should bear no charge.
445	7/4	variation of	variation in
448	Fig. 19.16/caption	PM	PMT
452	Question 3	of a single-oligonucleotide	an

Chapter 20

Page	*Paragraph/Line*	*Original text*	*Corrected text*
455	2/1	characteristics to QDs	characteristics
456	Sec 20.1.2.1/line 2	surface	surface properties
456	Sec 20.1.2.2/line 4	biotinylated antibodies	antibodies
456	Sec 20.1.2.2/line 5	biotin-functionalized	CdSe-ZnS core-shell
457	Fig. 20.3	610 mm	610 nm
458	Sec 20.1.2.4/par 2/line 3	thrombin	thrombin-specific
457	3/2	bed	bead
463	Fig. 20.13/caption/line 1	colate	cholate
465	1/2	[35]	[33, 35]
468	3/3	the antibody–antigen surface concentration	the surface concentration of the antibody–antigen complex
469	1/10	of the plasmon	in the plasmon
469	2/ 4	side	slide

Chapter 21

Page	*Paragraph/Line*	*Original text*	*Corrected text*
479	Sec 21.2.5/line 1	breaks	dampens
480	Sec 21.2.7.1/par 4/line 4	conditions	frequency
481	Sec 21.2.7.3/line 1	effect be	effect can be
481	Line 3 from the bottom	*m*	Δm
483	Table 21.1/caption/line 1	Eq. (21.26)	Eq.s (21.26) and (21.27)
483	Table 21.1/caption/ line 2	loading	loading [15]
485	Fig. 21.12/line 1	wave launch	wave
486	Line 3 above Sec 21.2.9 heading	dispersion	dissipation
487	1/4	lower	upper
496	Sec 21.5.2/line 7	aptamer	aptamer unit
498	Fig. 21.29/caption/line 1	SLAW	SAW
500	3/3	sparingly selective	cross-selective
502	Line 3 from the bottom	SAW	SLAW

Chapter 22

Page	*Line*	*Original text*	*Corrected text*
516	Question 6/line 1	(HS-(CH2)*n*-COOH)	(HS-(CH_2)*n*-COOH)

Chapter 23

Page	*Line*	*Original text*	*Corrected text*
520	Line 5 from the bottom	biological organisms	microorganisms
522	Line 3 from the bottom	pumps	drives