

ORTHOGONAL REVIEW RECORD

Stable Transfer Geometry of the Substituted Chrysene Network

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REVIEW SCOPE

This file consolidates the four supplied orthogonal-constraint reviews of the manuscript keyed FortyThree. Stages are mathematics (M), concordance (C), chemistry (H), and meta-review of the controlling text. The reviews are repeated below. There is no author-reply section. Description boxes record a rigorous multi-pass orthogonal review, not a Level-1 screen.

Scope of Review

Admissibility is joint membership $\mathbf{p} \in F_{\text{adm}} = M \cap C \cap H$. Scores are not averaged across stages. The controlling object is the final text. Mathematics mean 3.4 (minimum 3); concordance mean 3.0 (minimum 2); chemistry mean 2.8 (minimum 2). The meta-review accepts only if the two blocking concordance conditions are executed.

Compiled disposition

Accept with the listed conditions. M required repairs are in the controlling text. H required repairs are in the controlling text. Locator and status-label repairs from C are in the controlling text. Two C items remain blocking: three **corrected** rows against Volume 6, which the concordance pass did not see, and the retained name “dual-cipher fibration” for an object Remark 2.17 distinguishes from Axiom A8. If both are executed, the manuscript lies in $M \cap C \cap H$. If either stands, C fails and the intersection is empty.

Blocking conditions, from the meta-review

- (1) Withdraw the three [Sch26e] rows (Def. 6.2, Thm. 6.2, Thm. 14.5) from the disposition “corrected,” or reclassify them as “editorially proposed, not independently audited,” until Volume 6 is produced to a concordance pass that can quote the source sentences. Amend Table 6 item 11 so the lead clause no longer says every Table 5 locator was verified.
- (2) Retire “dual-cipher fibration” as the name of the Hypothesis 2.15/4.9 handoff sector in the abstract, the Section 4 heading, Hypothesis 4.9, Proposition 4.13, and running text. Keep Remark 2.17. Use a name that does not collide with $A_{\mathfrak{c}}^{\text{dual}}$ or with $\mathfrak{M}^{\text{dual}} = (\mathfrak{M}^{\text{pri}})'$. An editorial waiver is a decision that C is no longer required on this point; it is not a resolution.

Non-blocking repairs retained by the meta-review

- (1) Finish the rename promised by Table 6 item 6: Section 5.3 heading, Table 1, Remark A.13, and the bottleneck preamble should say robust-stability radius unless Theorem 8.13 is conjoined in the same sentence.
- (2) Retitle Remark 2.17 to match its body (three senses, not two).
- (3) Repair the Theorem 5.9 heading punctuation: “([Robust-stability radius]).”
- (4) Item 7 (Hypothesis 6.2 coverage) may remain open. It is labelled $[T]$ and does not falsify a $[D]$ statement that names the hypothesis.

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1. MATHEMATICS REVIEW (CRITERION M)**Stage M — mathematics only**

Accept subject to the listed required corrections. Mean 3.4, minimum 3. Concordance and chemical admissibility are outside scope and are not scored. Every numbered $[D]$ theorem that the paper uses later is either proved from the named hypotheses or reduces to a correctly invoked standard result. Defects that remain are local. No numerical claim failed recomputation.

Scores.

#	Dimension	Justification	Score
M1	Proof validity	All $[D]$ arguments that feed later results close. Proposition 4.13 over-quantifies the co-area formula; Proposition 6.22 cites an LTI small-gain theorem for a switched plant.	3
M2	Hypothesis hygiene	Named hypotheses are used as named. Silent domain restriction of d_{H^∞} to stable forms, and the internal tension in H_{reg} , keep the score off 4.	3
M3	Strength calibration	Quantifiers in Corollaries 7.5 and 7.8 are correct; Theorem 5.9 is a sufficient radius; “if and only if” in Theorem 4.16 matches the adjugate plus H_{min} argument.	4
M4	Definitional well-posedness	Objects have the right type on the stable set. Co-area and d_{H^∞} on all of Ω_{adm} are the defects.	3
M5	Counterexamples and witnesses	Each exhibited witness refutes the implication it is attached to.	4
M6	Numerical claims	Every recomputed value agrees to the reported precision. Sign of E_* is immaterial.	4
M7	Internal dependency	No cycle. Equation (30) is used before it is numbered; Table 3 verifies H_{reg} only on an open subinterval of the I in Theorem 4.16.	3
M8	External results	Co-area, Sokhotski–Plemelj, Privalov, Plancherel, bounded real lemma, and unstructured small-gain are invoked with standard hypotheses except as noted under M1.	3

Unweighted mean 3.4. Minimum 3. No dimension is 0 or 1. The mean lies below 3.5, so the compatible verdict is acceptance subject to the corrections below.

Findings.

F1. Locus. Proposition (Limiting absorption for the dual-cipher fibration), display (34), final sentence of the proof; Hypothesis (H_{reg}). **Criticism.** H_{reg}

demands $\nabla E_j(\theta) \neq 0$ at every point of every level set $E_j^{-1}(\lambda)$ for every $\lambda \in I$ that lies in a band, while $I = [-R, R]$ contains $\sigma(H_s)$. On $\mathbb{T}^3$ every continuous band function attains its extrema, so I contains critical values and the non-vanishing-gradient clause cannot hold as written. Display (34) is the co-area formula and is defined only at regular values. The last sentence asserts that the density is Lipschitz on a neighbourhood of I because $|\nabla E_j|$ is bounded below there. Continuity of $\Sigma(\lambda + i0)$ on I is a separate postulate and is what the embedded-mode exclusion actually uses; positivity of Γ follows from $\text{Im } \Sigma \leq 0$ without co-area. The overstated formula is unused where it fails, but the statement as written is false. **Severity.** Minor. **Type.** Local. **Required repair.** Restrict (34) to regular values. At the closed measure-zero set of critical values, invoke only continuity of H_{reg} and $\Gamma \geq 0$. Delete the lower bound on $|\nabla E_j|$ and the Lipschitz claim. Record van Hove points as a standing limitation.

- F2. Locus.** Definition (Edge cost and transformation metric); basic properties of d_{H^∞} . **Criticism.** The edge cost is $c(x, y) = \delta_u(G_x, G_y)$, defined on $\mathcal{G}$. Propositions on pure-point second sector and exact confinement produce admissible forms outside $\mathcal{G}$. The construction then asserts that d_{H^∞} is an extended pseudometric on all of Ω_{adm} . As written, $c(x, y)$ is undefined when either form has infinite gain. **Severity.** Minor. **Type.** Structural. **Required repair.** Declare the ground set $\{x \in \Omega_{\text{adm}} : \|G_x\|_{H^\infty} < \infty\}$, or extend c by $+\infty$ when either realization fails to lie in $\mathcal{G}$.
- F3. Locus.** Proposition (Policies survive), small-gain citation. **Criticism.** The plant induced by a compensating policy is the switched system (63), linear time-varying. The citation is Zhou–Doyle–Glover, Theorem 9.1, an LTI statement. The bound $\gamma_{\text{sw}}[x] \leq \gamma$ is an induced L^2 bound on a causal time-varying operator. The LTI citation does not apply. **Severity.** Minor. **Type.** Local. **Required repair.** Cite an input-output small-gain theorem that does not require time-invariance of both factors, and record $\|\Delta\|_{L^2 \rightarrow L^2} \leq \|\Delta\|_{H^\infty}$ for the LTI environment factor.

No other finding meets the threshold. Embedded-mode exclusion is valid on the repaired reading of H_{reg} already present in Remark A.10 and Step 1. The adjugate converse is guarded by H_{min} . The survival-radius theorem applies small-gain to two LTI operators and is not the object of F3. Portability is a metatheorem whose proof by inspection is legitimate once ingredients are enumerated. No $[T]$ or $[E]$ statement is used in a proof. The self-identified ledger item on Step 1 is already repaired and is not re-opened.

Verification log.

Claim	Paper	Recomputed	Status
Ex. 5.19, $\phi = 0$, $g = \frac{1}{2}$, $\sup [S_0]_{21} $	2/3	0.6666666	agree
Ex. 5.19, $\phi = \pi/2$, $\sup [S_{\pi/2}]_{21} $	12/13	0.923076923	agree
Same, $\sup [S_{\pi/2}]_{12} $	$1/\sqrt{3}$	0.577350269	agree
$S_\phi(E)$ unitary on $\mathbb{R}$	asserted	$\ S^*S - I\ \leq 1.8 \times 10^{-15}$	agree
Attainment energy $\sup [S_{\pi/2}]_{12} $	$E_* \approx -1.65831$	same modulus at ± 1.65831	sign conventional
$c_{\text{att}}(1, 2) = \log(13/12)$	≈ 0.0800	0.0800427	agree
$c_{\text{att}}(2, 1) = \frac{1}{2} \log 3$	≈ 0.5493	0.5493061	agree
Prop. 6.6, $\rho(e^{A_b T} e^{A_a T})$, $T = 3/20$	73.7184	73.718475	agree
Second eigenvalue	7.4447×10^{-3}	7.44470×10^{-3}	agree
$\beta = \log \rho/(2T)$	14.3342	14.334178	agree
$\ e^{A_a \cdot 2T}\ _2$	1.4212	1.421160	agree
Spectrum A_a, A_b	$\{-1 \pm 10i\}$	same	agree, both Hurwitz
Spectrum $A_a + A_a^\top$	$\{-101, 97\}$	same	agree
Family (82), $\ T_\gamma\ _{H^\infty}$	$\gamma^{-1/4}$	same	agree
Family (82), $\ T_\gamma\ _{H^2}$	$\gamma^{1/4}/\sqrt{2}$	same	agree
Prop. A.4, $g_s(\pm 2)$	± 1	$g_s(2) = 1, g_s(-2) = -1$	agree
Prop. A.8, $\ G\ _{H^\infty}$	$1/v^2$ or $1/(2 - v^2)$	grid match	agree
Rem. A.19 gains	$4, 2, 1, 1/(2 - v^2)$	$4, 2, 1, 1.26582$	agree
Prop. A.11 norms	$1, \frac{1}{2}, 1, 2$	same	agree
δ_u values	$0, \frac{1}{2}, \frac{3}{2}, 1$	same	agree
d_{H^∞} values	$0, \frac{1}{2}, 2, \frac{3}{2}$	same	agree
Ex. 7.16, r_{emb}	$2 - v^2$	attained at $ E = 2$	agree
Unstructured margin, $v^2 = \frac{1}{4}$	$1/4$ vs $7/4$	0.25 vs 1.75	agree
Ex. A.15, $ G \eta \rightarrow \frac{1}{2}$	asserted	residue $1/2$	agree
Prop. 8.15, $\ G_n\ _{\text{pk}}, n = 1$ to 64	listed	$n = 64$ differs by 1.2×10^{-3}	agree; quadrature tail
$\ G_n\ _{\text{pk}}/\sqrt{n}$	3.00 to 2.35	3.00 to 2.354	agree

No substantive discrepancy. The sign of E_* is conventional. The $n = 64$ tail is 0.001.

Three weakest points.

- W1. Regularity package for the second fibration.** Embedded-mode exclusion stands or falls with continuous boundary values of the self-energy on a compact interval that contains the whole spectrum of H_s , including band edges and van Hove energies. Continuity is hypothesized, not proved from finite-range analyticity on $\mathbb{T}^3$. This is the unique analytic load-bearing point of Section 4.
- W2. Markovian cut in Section 6.** H_{ss} demands a rational self-energy. The only closed-form witness uses the half-line function g_s , algebraic and not rational, and is recorded as not instantiating H_{ss} . The common-storage, shared-fibration, and dwell-time statements are theorems without an exhibited instance.

W3. Uncoupled conjunction that is the survival claim. Robust stability is an H^∞ small-gain statement (Theorems 5.9 and 6.13). Invariance of Ω_{adm} is a peak-gain statement (Theorem 8.13). Proposition 8.15 shows that no function of $\|\cdot\|_{H^\infty}$ controls $\|\cdot\|_{\text{pk}}$. The conjunction is the first object to become empty under a disturbance small in L^2 and large in L^∞ .

2. CONCORDANCE REVIEW (CRITERION *C*)**Stage *C* — concordance only**

Concordant subject to the listed required corrections. Mean 3.0, minimum 2. The manuscript does not add a thirteenth axiom, does not discharge any deferred target of [Sch26c, §11], and restates the source non-implications as Proposition 9.1. It is not concordant without repair. Three of five Table 5 rows classified **corrected** point into [Sch26e], which was not supplied. The abstract’s “six corrections” does not match five **corrected** rows. “Dual-cipher fibration” is used for the Hypothesis 2.15 handoff sector after Remark 2.17 has forbidden identifying that sector with Axiom *A8*.

Question judged. Does the manuscript extend the Chrysene Formalism as that formalism actually stands, without misquoting it, silently weakening it, covertly strengthening it, or treating any deferred result as established?

Supplied. Manuscript FortyThree; twelve-axiom paper [Sch26c], pages 405–476; editorial survey [Sch26b]; monograph Volume 1 [Sch26d]; monograph Volume 2 [Sch26f].

Not supplied. Volume 6, *Medicine in the Chrysene Topos* [Sch26e]; Volumes 3–5 and 7–12. Every locator into those documents is marked not supplied.

Scores.

#	Dimension	Score	Justification
C1	Axiom fidelity	3	A10 indexed by (α, N) ; A12 strict inequalities kept. Residual slip: “dual-cipher fibration” for an A8-distinct handoff sector.
C2	Status fidelity	3	Table 4 marks every §11 target untouched. [A] on Proposition A.2 and Remark A.7 is not justified.
C3	Restraint preservation	4	Proposition 9.1 and Remark 9.2 preserve the source non-implications and the governing restraint.
C4	Structural preservation	3	Spectral and Hamiltonian layers stay separate. A8 commutant is not identified with the coupling. Residual third sense of “cipher.”
C5	Hypothesis legitimacy	3	Hfib–Hchem match Def. 3 and are named where used. Hout is strong but is not used as an axiom.
C6	Table accuracy	3	Two Table 4 rows mis-cite the source. Abstract “six” $\neq$ five corrected rows. [Sch26e] locators un-auditable.
C7	Correction validity	2	[Sch26d, Rem. 8.1] and [Sch26f, Thm. 9.2.5] say what Table 5 reports. Three [Sch26e] corrections cannot be quoted.
C8	Terminology	3	Graph versus transfer isomorphism flagged. “Survival,” “scission,” and “dual-cipher fibration” still drift.

Findings.

- (1) **Abstract versus Table 5.** The abstract claims six corrections. Table 5 has five **corrected** rows. Proposition 4.21 is **extended**, not **corrected**. **Minor, local.** Replace “six” by “five,” or name a sixth row.
- (2) **[Sch26e] rows.** Def. 6.2, Thm. 6.2, Thm. 14.5, and Remark B.2 cannot be checked. Criterion C7 forbids a correction of record whose source cannot be quoted. **Major, structural.** Withdraw the three rows until Volume 6 is produced, or quote the source sentences.
- (3) **Third sense of “cipher.”** Remark 2.17 correctly refuses to identify the Hypothesis 2.16 site-label with the A8 commutant. The abstract and Proposition 4.13 then call the Hypothesis 2.15 handoff sector “the dual-cipher fibration.” **Major, structural.** Ban that name for the handoff sector. Keep Remark 2.17.
- (4) **[A] labels.** Proposition A.2 and Remark A.7 depend on constructed data not fixed by A1–A12. Under [Sch26c, Def. 1] they are not axiomatic. **Minor as mathematics; major as status if the labels stand.** Relabel both [D] and name the extra data.

- (5) **Table 4, Eqs. (2)–(3).** In [Sch26c] those displays are $\mathcal{A} := \{A_1, \dots, A_{12}\}$ and $\text{Mod}(\mathcal{A})$. The non-implications are unnumbered on p. 2 and in display (444), and numbered only in [Sch26b, §3.1]. **Minor, local.** Cite p. 2 and (444), or [Sch26b].
- (6) **Table 4, Rem. 31.** Remark 31 is geometric translation of the graph, not framework symmetry versus transfer symmetry. The latter is Remark 32 and display (444). **Minor, local.** Move the row or restate Remark 31 as written.
- (7) **Prop. 31 / Proposition 4.21.** Disposition **extended** is correct. Not a defect.
- (8) **Ext₁₂ after replacing A10/A12 data.** Remark 62 licenses the replacement. Residual only through Finding 4. Cite Remark 62 at the membership claim.
- (9) **[Sch26d, Rem. 8.1].** Paraphrase is accurate. Keep **corrected** only if the manuscript asserts the source sentence is false, not merely that a different mechanism also works.
- (10) **[Sch26f, Thm. 9.2.5].** The source theorem-sentence matches Table 5. The source proof already contradicts “strictly immune.” Disposition **corrected** is earned. No repair.
- (11) **Hypothesis 6.2.** Not a thirteenth axiom, but used throughout Section 6 and absent from the only witness. Already recorded as Target 6.26. Name it in every Section 6 theorem that uses it, including the corollaries advertised in §1.3 item 3.
- (12) **“Survival” and “scission.”** Title and §1.3 still sell Theorem 5.9 as a survival radius. “Scission” is kept off the conclusions. Say “robust-stability radius” unless Theorem 8.13 is conjoined in the same sentence.

Locator audit (abridged to the failures and the load-bearing confirmations).

Locator	Manuscript reports	Status
[Sch26c] A1–A12	twelve axioms, no addition	confirmed
Defs. 1, 3, 5, 6	status vocabulary	confirmed
Eq. (2)	geometric $\nrightarrow$ transfer	mischaracterized (number)
Eq. (3)	$d_C^* = +\infty \nrightarrow$ scission	mischaracterized (number)
Rem. 31	framework $\nrightarrow$ transfer symmetry	mischaracterized (content is Rem. 32)
Prop. 31	preservation of admissible sector	confirmed
Thm. 61 / Rem. 62	non-vacuity; replacement licensed	confirmed
Thms. 42, 44, 49	deferred targets, not discharged	confirmed
p. 2 and (444)	source non-implications	confirmed
[Sch26d] Rem. 8.1, Thm. 8.2	quoted	confirmed
[Sch26f] Thm. 9.2.5	strict immunity	confirmed; proof already weaker
[Sch26e] Def. 6.2, Thm. 6.2, Thm. 14.5	corrections of record	not supplied

Table 5’s claim that every locator was verified is true of the [Sch26d] and [Sch26f] rows checked and not repeatable for [Sch26e].

Three weakest points.

- (1) Unauditable corrections of record. Three of five **corrected** rows live in [Sch26e]. *C7* is the override dimension.
- (2) The third sense of “cipher.” Remark 2.17 separates the *A8* commutant from the site-label cipher. The abstract and the dissipation theorem then name a third object with the *A8* adjective.
- (3) [*A*] labels on constructed witness data. Remark 62 licenses replacing *A10* and *A12* data. It does not license labelling the resulting five-point datum and the composite Hamiltonians [*A*].

3. CHEMISTRY REVIEW (CRITERION H)**Stage H — chemistry and domain only**

Admissible subject to the listed required corrections. Mean 2.8, minimum 2. The reference chrysene framework—vertex set, four ring memberships, 21-edge bond set, attachment sets $\{3, 6, 9, 12\}$ and $\{2, 5, 8, 11\}$, and the permutation σ —matches IUPAC numbering and the C_{2h} half-turn. The rearrangement as a labelled-graph rewrite is a well-formed five-cycle and destroys R_1 only. It is not chemically admissible without repair of the name “pegylating,” the word “saturated,” and the mapping onto [Sch25].

Question judged. Is every molecular assertion chemically correct, correctly named, and stated at a strength the chemistry supports? Glycolytic-enzyme and furanose analogies named in the prompt do not appear in this manuscript and are not invented here. “Ghost pocket” is not defined in any prior supplied source.

Scores.

#	Dimension	Score	Justification
H1	Nomenclature and locants	4	Vertex set, rings, edge set, and both attachment sets match IUPAC and App. A.5. Fusion dictionary is uniquely fixed and unwritten.
H2	Rearrangement structure	3	Five-cycle, destroyed R_1 , surviving R_2, R_3, R_4 , and σ -image are correct. “Joined by C3–C4” omits C4a.
H3	Atom and valence accounting	2	“Saturated” and $C_\alpha H_2$ after C_α –C1 cannot both stand. C12a uncapped. Oxidative cleavage and a simple C–C join are type-incompatible.
H4	Substituent chemistry	2	Chain (7) is 2-phosphoethoxy, not polyethylene glycol. Charge of OPO_3 unspecified.
H5	Claim strength	3	Numbered molecular remarks are $[E]$. Unmarked intro prose still overstates.
H6	Provenance	2	[Sch25] exists and initiates an oxidative-cleavage cascade. Product (8) is not the patent product. No reagent set is listed.
H7	Physical interpretation	3	Reciprocity default is correct. “Catalytic pocket” has no chemical definition.
H8	Separation from mathematics	3	No chemical premise enters a proof. Intro narrative still reads as a physical finding.

Findings.

- (1) **“Pegylating.”** Chain (7) is C_k –O– $C_\alpha H_2$ – $C_\beta H_2$ – OPO_3 , a 2-phosphoethoxy substituent. PEG is $-O(CH_2CH_2O)_n-$ with n typically ≥ 4 . The granted Markush of [Sch25] distinguishes hydroxylalkoxy from hydroxylpolyethyleneoxy.

- Major, structural.** Replace “pegylating” by “2-phosphoethoxy.” If hydrophilicity is intended, attribute it to four terminal phosphates.
- (2) **Valence of cycle (8).** The rewrite deletes one framework bond and forms one C–C bond. That does not saturate C1–C2 or C2–C3. If C α remains C α H₂ after the new bond, C α is pentavalent. C12a, after loss of C1, has two carbon neighbours and no stated cap. **Major, structural.** Drop “saturated” and write residual unsaturation, or add the hydrogens and the C12a cap. Rewrite C α H₂ as C α H in (8).
 - (3) **[Sch25] provenance.** US 12,195,423 and continuation US 12,473,247 describe 3,6,9,12-substituted chrysene ethoxy/phosphate derivatives and a cascade initiated by oxidative cleavage. Oxidative cleavage yields carbonyl carbons, not a free C1 for an unmodified join to C α . Product (8), a pendant five-cycle on a residual phenanthrene, is not the patent product. **Major, structural.** Cite [Sch25] as the source of the substituent class and of an oxidative-cleavage process family, not as a composition certificate for (8). Delete “specified reagent set” or quote the reagents.
 - (4) **Attachment path.** After deletion of C1–C12a, $R_2 \cup R_3 \cup R_4$ is a phenanthrene. The path from (8) into the residual system is C3–C4–C4a. C4 is a CH spacer in neither (8) nor R_2 . **Minor, local.** Write “pendant; attachment path C3–C4–C4a into R_2 .”
 - (5) **Fusion dictionary.** Adjacency fixes $w_1 = \text{C12a}$, $w_2 = \text{C10b}$, $w_3 = \text{C4a}$, $w_4 = \text{C10a}$, $w_5 = \text{C4b}$, $w_6 = \text{C6a}$. Insert the six-line dictionary in Definition 2.25.
 - (6) **Pocket language.** Definition 8.3 defines a ghost as persistence of a nucleated environment state. That is not a chemical pocket. Confine “pocket” to remarks marked [E]. Do not analogize to an enzyme active site.
 - (7) **Terminal phosphate.** Write OPO₃H₂ or “phosphate, free acid or salt.”

Structure audit. Vertex set of cardinality 18, rings R_1 – R_4 , edge set of cardinality 21, both attachment sets, $v_k \leftrightarrow Ck$, σ as the C_{2h} half-turn extended to fusion carbons, destruction of R_1 only, survival of $R_2 \cup R_3 \cup R_4$ after $R^{(3)}$, and $R^{(9)}$ as the σ -image: confirmed. “Saturated,” C α H₂ after the new bond, and “pegylating”: incorrect. Attachment “by the single bond C3–C4”: imprecise. [Sch25] as the corresponding transformation of product (8): imprecise. Reciprocity absent B and magnetic constituents: confirmed. Furanose and glycolytic-enzyme analogies: absent from the manuscript.

Three weakest points.

- (1) Valence of the rearrangement product. Cycle (8) cannot be simultaneously the two-bond rewrite, a saturated ring, and a ring that still contains C α H₂.
- (2) The word “pegylating.” Four 2-phosphoethoxy groups are not PEG. The name will enter the corpus as the substituent class of record if it stands.

- (3) Provenance of product (8). [Sch25] supports the substituent class and an oxidative-cleavage cascade. It does not support the pendant five-cycle, and the manuscript lists no reagent.

4. META-REVIEW

Final stage — controlling text

Accept with the listed conditions. Means: M 3.4, C 3.0, H 2.8. Admissibility requires $\mathfrak{p} \in F_{\text{adm}} = M \cap C \cap H$. The controlling object is the final text. M is satisfied. H is satisfied. C is not satisfied as the text now stands.

Disposition of findings.

Finding	Criticism	Disposition	Locus
M/F1	co-area on an interval containing critical values	resolved	Hyp. 4.12; Prop. 4.13; Rem. 4.14
M/F2	d_{H^∞} on all of Ω_{adm}	resolved	Def. 5.5, $c = +\infty$ off $\mathcal{G}$
M/F3	LTI small-gain for a switched plant	resolved	Prop. 6.22, IO form and Liberzon
M/W1–W3	regularity, Markovian cut, uncoupled survival	limitations retained	Rem. 4.14; Target 6.26; Thm. 8.13
C/1	six versus five corrections	resolved	Abstract; Table 5 caption
C/2	three [Sch26e] rows still corrected	partially resolved	Table 5; Table 6 item 11
C/3	dual-cipher fibration	unresolved (declined)	Rem. 2.17; name retained
C/4	[A] on Prop. A.2 and Rem. A.7	resolved	both now [D]
C/5	Eqs. (2)–(3) mis-cited	resolved	p. 2 and (444); [Sch26b]
C/6	Rem. 31 reported Rem. 32	resolved	Rem. 32 and (444)
C/8	Ext_{12} after A10/A12 replacement	resolved	Rem. 62 cited
C/9	“corrected” only if source asserted false	resolved	Table 5
C/11	Hyp. 6.2 unnamed	named; open	coverage Target 6.26
C/12	survival radius	partially resolved	Thm. 5.9 renamed; §5.3, Table 1, Rem. A.13 not
H/1	pegylating	resolved	Def. 2.26; Rem. 2.27
H/2	saturated; pentavalent $C\alpha$; C12a uncapped	resolved	Def. 2.28; Rem. 2.29
H/3	[Sch25] as certificate for (8)	resolved	Rem. 2.34; Rem. B.7
H/4	joined by C3–C4	resolved	path C3–C4–C4a
H/5	fusion dictionary unwritten	resolved	Def. 2.25, display (7)
H/6	pocket as a finding	resolved	confined to [E] remarks
H/7	OPO ₃ protonation	resolved	OPO ₃ H ₂ or salt

Admissibility.

M. Satisfied. The three required corrections are present at the point of use. Remaining weaknesses are stated as hypotheses or targets.

C. Not satisfied. Two required defects remain: three **corrected** rows against [Sch26e] after an admission that they were not independently audited, and the homonym “dual-cipher fibration” retained after an explicit decline. Either item alone takes the manuscript out of *C*.

H. Satisfied. The three major structural findings and the four lesser findings are answered in numbered definitions and [*E*] remarks. No chemical premise is used in a proof.

Ledger integrity. Table 6 is accurate on items 1–5, 7–10, and 12–14. It is not accurate on two rows. Item 6 claims the radius was renamed; Theorem 5.9 was renamed, and the section title, Table 1, Remark A.13, and the bottleneck preamble were not. Item 11 states that every Table 5 locator was verified, then qualifies “editorial for [Sch26e].” The qualifier is true; the lead clause is not. Item 7 correctly records an accepted coverage gap. Item 14 correctly records a declined criticism.

Repair-induced defects. Theorem 5.9 heading is broken in the extracted text: “([Robust-stability radius).” Remark 2.17 is titled “Two senses of ‘cipher’” while its body claims three. Terminology splits after the rename. Abstract, Section 4 title, Hypothesis 4.9, and Proposition 4.13 keep “dual-cipher fibration” after Remark 2.17. Target 8.25 then invites identifying a scaling class with the *A8* commutant under that adjective. The abstract count is now five, matching Table 5.

For the editorial record. Mathematics found local defects that the revision repaired. Concordance found locator errors, status-label inflation, and a homonymy that would let an *M*-strengthening weaken a named *A8* structure; the first two were repaired and the third was declined. Chemistry, on a manuscript that quarantines every molecular sentence as [*E*], still produced three major structural findings: a valence ledger that did not close, a substituent misnamed as PEG, and a provenance claim that outran [Sch25]. Those three were repaired. That distribution is evidence for the architecture. It is also evidence against reading the Article 41 case study as the expected profile: that study reported concordance as the source of structural corrections and chemistry as nomenclature-only. One prior data point is now contradicted. Do not average the two cases.

Correction counts against the reviews as written and the final text as controlling: *M*, three required findings, all minor, all resolved; *C*, twelve findings, two major/structural, one partially recorded and one declined; *H*, seven findings, three major/structural, all resolved.

REFERENCES

- [Lib03] D. Liberzon. *Switching in Systems and Control*. Birkhäuser, Boston, 2003.
- [Sch25] C. D. Schaper. US Patent 12,195,423; continuation US 12,473,247.
- [Sch26b] C. D. Schaper. The chrysene formalism as candidate mathematics and candidate biogenesis. *Annals of the Chrysene Formalism*, 1(2):476–488, 2026.
- [Sch26c] C. D. Schaper. The chrysene formalism revisited: a twelve-axiom foundation. *Annals of the Chrysene Formalism*, 1(2), 2026.

- [Sch26d] C. D. Schaper. *Foundations of the Chrysene Formalism*. Schaper Systems Press, 2026.
- [Sch26e] C. D. Schaper. *Medicine in the Chrysene Topos*. Schaper Systems Press, 2026.
- [Sch26f] C. D. Schaper. *Tensorial Framework of the Chrysene Formalism*. Schaper Systems Press, 2026.
- [ZDG96] K. Zhou, J. C. Doyle, and K. Glover. *Robust and Optimal Control*. Prentice Hall, 1996.

REVISION HISTORY

Version	Date	Notes
v1.0	12 September 2026	Consolidated M , C , H , and meta-review. Conditional acceptance.

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As with any actively developing field, the mathematical and applied claims in this article are subject to periodic re-evaluation as the surrounding formalism matures and as the journal's AI-augmented review tooling advances. Consistent with standard scientific practice for provisional or fast-moving frameworks, this article and its review record may be re-audited by subsequent review systems, and a revised version bearing an updated review history may be issued to reflect developments in the field. Readers should consult the Revision History table above, and the journal's records, for the current version number and audit date of this article.

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