The earliest Arabic documents written on paper: three letters from Sanjar-Shah (Tajikistan)
CONTENTS

Robert Hoyland  Obituary for Patricia Crone: a student’s view  i

Patricia Crone: list of publications  v

Mehdy Shaddel  Qurʾānic ummī: genealogy, ethnicity, and the foundation of a new community  1

Raoul Villano  Phonological deletion in the Qurʾān: the alternation of ʾistāʿa and ʾistafāʿa in Sūrat al-kahf  61

Francesco Grande  From word to construction: a syntactic etymology of the Qurʾānic Arabic lāta  101

Ofir Haim, Michael Shenkar and Sharof Kurbanov  The earliest Arabic documents written on paper: three letters from Sanjar-Shah (Tajikistan)  141

Aryeh Levin  What does Sībawayhi mean by ḥarfun... laysa bi-smin wa-lā fiʿlin  191

Arik Sadan  Arab grammarians’ theories versus actual linguistic usage: the naṣb (subjunctive) mood after lan and ḥattā as used in al-Īṣfahānī’s Kitāb al-aghānī  209

Michal Marmorstein  Subtleties of narrative syntax: patterns of chaining in Classical Arabic narratives  219
<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmad Ighbariah</td>
<td>Grammatical features in Ibn al-Muqaffa’s <em>Categories</em></td>
<td>251</td>
</tr>
<tr>
<td>Nader Masarwah and Ghaleb Anabseh</td>
<td>Acoustic rhythm in al-Ḥarīrī’s <em>Maqāmas</em></td>
<td>273</td>
</tr>
<tr>
<td>José Martínez Delgado</td>
<td><em>Risālat al-tanbih</em> by Ibn Ǧanāḥ: an edition, translation and study</td>
<td>309</td>
</tr>
<tr>
<td>Yaacov Lev</td>
<td>The Red Sea: medieval Muslim internal maritime artery. A review article</td>
<td>357</td>
</tr>
<tr>
<td>Milka Levy-Rubin</td>
<td>William F. Mccants. <em>Founding Gods, inventing nations: conquest and culture myths from Antiquity to Islam</em></td>
<td>381</td>
</tr>
<tr>
<td>Mohammad-Ali Amir-Moezzi</td>
<td>Ehud Krinis. <em>God’s chosen people: Judah Halevi’s Kuzari and the Shi‘ī Imām doctrine</em></td>
<td>389</td>
</tr>
</tbody>
</table>
THE EARLIEST ARABIC DOCUMENTS WRITTEN ON PAPER:
THREE LETTERS FROM SANJAR-SHAH (TAJIKISTAN)\(^1\)

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(With an appendix by Anna-Grethe Rischel and Michelle Taube,  
National Museum of Denmark)

1. **Introduction**

Sanjar-Shah is located on the southern outskirts of the modern village of Sujina, some 12 kilometers east of Panjikent in northern Tajikistan [*Fig. 1*]. It was first surveyed in 1947 by a team of Soviet archaeologists headed by Olga I. Smirnova.\(^2\) Unfortunately, almost the entire surface of the site (except for Area 2 in the east, the southern wall, and the round tower in the northwestern corner) was leveled for agricultural use by the local authorities in 1953 and further in 1975. In 2001 and 2003, the first archaeological investigations at Sanjar-Shah were conducted by the German-Tajik archaeological team led by Gerd Gropp and Sharof Kurbanov.\(^3\) In 2008, the excavations were renewed by Sharof Kurbanov and Alexey Savchenko with the financial support of the Swiss Society for the Exploration of Eurasia.\(^4\)

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\(^1\) We would like to thank Frantz Grenet, Yury Karev, Geoffrey Khan, Ella Landau-Tasseron, Michael Lecker, Pavel Lurje, and Shaul Shaked for their help and valuable suggestions.


\(^3\) Gropp and Kurbanov, “Erster Vorbericht.”

\(^4\) Several brief reports have been published so far: Kurbanov, “Otchet o robotakh Vostochno-Sogdijskoj”; idem, “Arkheologicheskie raskopki”; idem, “Otchet o robotakh na gorodishche”. See also annual preliminary reports on the website of The Society for the Exploration of Eurasia: [http://www.exploration-eurasia.com/EurAsia/inhalt_english/frameset_projekt_5.html](http://www.exploration-eurasia.com/EurAsia/inhalt_english/frameset_projekt_5.html).
2014, the Sanjar-Shah excavations have been directed by Michael Shenkar and Sharof Kurbanov. So far, they have focused primarily on the round tower (Area 1) and on the eastern part of the site (Area 2) which were not affected by the Soviet-era leveling.

Sanjar-Shah is erected on a natural terrace on the right bank of the Magian-darya close to its confluence with the Zeravshan river. The site is 5 hectares in area and it was originally composed of two distinct parts: the round tower in the north-western corner and the city itself (shahrestan), subdivided into the western part and the eastern parts [Fig. 2]. On the northern and the western sides, steep slopes offered natural protection. In the south and in the east, solid walls made of *pakhsa* (rammed earth) blocks were built. An additional inner wall, that originally separated the western and the eastern parts, is clearly visible on the plan of 1947. Sanjar-Shah was probably founded in the 5th century CE and abandoned at the same time as Panjikent, in the 770’s, or perhaps a little later, around 780. All the rooms uncovered in Area 2 probably belonged to two or more different households separated by a large open courtyard and a wide street. Furthermore, it appears that this part of Sanjar-Shah housed living quarters as well as craftsmen’s workshops.

The tower excavated in Area 1 is round in shape and was divided into two parts [Figs. 3-4]. The central two-story section of the tower (11.2 m in diameter) was probably built in the early 6th century and consisted of two rooms. It was constructed of sun-dried mud-bricks and the walls were preserved up to 6.80 m. In the 7th century, the tower was surrounded by a one-story circular gallery with 11 additional rooms, bringing the overall diameter of the tower to 24 meters. Since it contains no living quarters, the tower probably served as a watchtower, with perfect views of and control over the road to Panjikent and the Kashka-darya valley, further south along the course of Magian-darya river. During the last phase the tower probably served as a granary and a barn.

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We would like to express our gratitude to the Director of the Society for the Exploration of Eurasia, Dr. Cristoph Baumer, for his help and support.

* Architects – Alexey Akulov and Elena Bouclaeva; area supervisors – Abdurahmon Pulotov and Firuz Aminov.

* The southern wall is preserved to the height of 5 meters.
To our knowledge, the architectural layout of the Sanjar-Shah tower is unique in Sogdian fortifications. An interesting comparison is presented by a circular fort (45 meters in diameter) excavated by the French-Uzbek Archaeological Mission in Sogdiana at Sangyr-tepa near modern Shahr-i Sabz in the Kashka-darya valley and dated to the 4th century. Although the inner layout of the Sangyr-tepa fort is completely different from that of the Sanjar-Shah tower, the circular shape, which is otherwise unattested in Sogdiana and the close proximity in time, could suggest a connection. Interestingly, Sanjar-Shah controls the road along the Magian-darya via which the Shahr-i Sabz oasis can easily be reached.

The modern name of Sanjar-Shah refers to the Saljuq ruler of Khurāsān (490-511/1097-1118), who later became the sultan of the Great Saljuq Empire (511-52/1118-57). It was probably given by the inhabitants of the local village Sujina, who are Uzbek-speaking. Sujina was founded in the first half of the 19th century by the turkicized Barlas tribe, who arrived there from the Kashka-darya valley. The name sujina seems to derive from the Sogdian swcynk (‘burned’). Unfortunately, no such toponym is attested in the Mount Mugh documents and therefore the Sogdian name Sanjar-Shah remains unknown. Surprisingly, Smirnova, who studied the toponyms of the Upper Zeravshan valley based on the Mount Mugh documents and first surveyed the site of Sanjar-Shah in 1947, never ventured to suggest any identification for the ancient name of the town. Gerd Gropp, who conducted the first excavations at Sanjar-Shah, assumed that the ancient name of the site was “Magian”. However, he was relying on an erroneous reading of m’yy’n in the Mount Mugh documents, following Smirnova who identified it with the modern village of Magian, south of Sanjar-Shah in the upper stream of the Kashka-darya.

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1 For the study of the Sogdian fortifications, see Semenov, Sogdīskaya.
3 Bushkov, Naselenie, p. 67.
4 We are grateful to Pavel Lurje for this information.
5 A collection of documents (75 in Sogdian, one in Arabic, one in Turkic runes) discovered in 1932-1933 in the ruins of the fortress Qal’a-yi Mūgh in the Upper Zeravshan region (northern Tajikistan) and connected with Dhewāshtīch – the last ruler of Panjikent (d. 722). For the English edition and translation of the Sogdian documents, see Livshits 2015.
6 See Smirnova, “Voprosy”; idem, “Karta”.
of the Magian-darya.\footnote{His etymology for \textit{m’γy’n} as “City of Magi” is also clearly wrong. The name of the river and modern village probably derives from Old Iranian *\textit{magā-} “pit”, “ditch”. Smirnova, “Voprosy,” p. 59; Lurje, \textit{Istoriio-lingvisticheskiy analiz}, p. 73.} In fact, no such toponym is attested in the Mugh archive.\footnote{This word is better read as \textit{m’xy’n} – “Boon of (moon)-god”. See Lurje, \textit{Personal names}, no. 653.}

Other than the city of Panjikent itself, Sanjar-Shah is by far the largest settlement in the Panjikent area. Among the other settlements in the Upper Zeravshan valley, only Hisorak is larger (around 7 hectares), but it is located considerably further away – 230 km to the east of Panjikent. It is hard to believe that such a large and economically important town in the immediate vicinity of Panjikent would escape mention in the Mugh documents that record dozens of small villages and estates in the Upper Zeravshan region. How then can Sanjar-Shah’s absence be explained?

The two principal components of the Mount Mugh documents are the archive of Dhēwāshtīch, ruler of Panjikent, and the archive of \textit{Framāndār Ŭt} (\textit{prmn’dr ‘wtt}).\footnote{For the Mount Mugh documents, see Livshits, \textit{Sogdian epigraphy}.} \textit{Framāndār} (‘order holder’) Ŭt was the highest administrative authority in the region, inferior only to Dhēwāshtīch himself. On an order for a consignment of wine, Dhēwāshtīch uses the phrase “lots of respect” (\textit{yrβ nm’cy-w}) in addressing the \textit{framāndār} (A-16, 3). This kind of phrase is routinely used by other Sogdian nobles and petty lords in their letters to the Panjikent king. Dhēwāshtīch employs the same phrase only in a letter to Afshūn, lord of Khākhsar (B-17), on whom the lord of Panjikent lavishes excessive praise in the hopes of winning his loyalty. Ŭt is the addressee of several letters; he is sometimes called “Lord” (\textit{xwβ}) by his inferiors (A-6, A-1, B-11, B-13, B-15, B-18), but in his case \textit{xwβ} is not a title, since his domain is never named, but rather a form of polite address to a superior, similar to the English “Sir”.\footnote{For a lengthy discussion of this title, see Smirnova, \textit{Ocherki}, pp. 55-65.}

If Ŭt was a powerful noble and landlord, why is his domain not mentioned in the letters? One possible answer is that his title – \textit{framāndār} – was sufficiently elevated for his previous title to be deemed unnecessary. For instance, when Dhēwāshtīch lays claim to the titles “king of Sogd, lord of Samarkand” (\textit{sγwδyk MLK’ sm’rknδc MR’Y/MRY’}), he drops the inferior title “lord of Panjikent” (\textit{pncy MR’Y}). Another possibility is that Ŭt did not have
his own “familial” domain, but rather was a wealthy merchant and administrator whose authority derived from his role as the framāndār of the Panjikent ruler.

Alternatively, it was assumed that his domain was located in the region of the Magian-darya river, near the modern village Filmendor, whose name derives from framāndār.18 Another suggestion locates his seat in the castle excavated in the village of Kum.19 The archaeological investigations conducted by A. Isakov at the site of Filmendor in 1974 revealed a small castle 20 x 14 m dated to the 5th century.20 However, it seems improbable that such a small and insignificant site could be the seat of a high-ranking official. While Filmendor might well have been framāndār’s “weekend retreat” (or have marked the southern border of the region he administered),21 the main residence of the framāndār was probably Sanjar-Shah, located some 11.1 km down the Magian-darya river as the crow flies and approximately one hour away on horseback. As the second largest settlement after Panjikent, Sanjar-Shah seems to be the perfect candidate for the seat of the second-ranking official after the Panjikent ruler.

There can be little doubt that from an economic and strategic perspective, Sanjar-Shah would have been crucial to whoever controlled Panjikent. If the identification of Sanjar-Shah as the principal seat of the framāndār is correct, the “framāndār portion” of the Mount Mugh documents has its origins in Sanjar-Shah. It is also quite likely that Sanjar-Shah was under the direct administration of Panjikent and that the framāndār was in fact appointed by the Panjikent ruler. We can even speculate that on account of the proximity and special ties that undoubtedly existed between Panjikent and Sanjar-Shah, their populations were considered part of the same civic community (nāb). Interestingly, well into the first half of the 20th century, local inhabitants of Panjikent identified Sanjar-Shah as the site of “Ancient Panjikent” and not the site of Kaynar-su, where excavations revealed the

18 Livshits, Sogdian epigraphy, pp. 111-112.
19 Yakubov, Runenevrednye poseleniya, p. 95.
21 Frantz Grenet points out (private correspondence) that it is not certain that Filmendor was named after ūt. It might have received its name in another period and for another holder of the office of framāndār.
remains of the city of Dhēwāștīch. This would further support the idea that close ties existed between Panjikent and Sanjar-Shah in the 5th-8th centuries.

Although the suppositions above do not shed light on the ancient name of Sanjar-Shah, they at least provide a plausible explanation as to why Sanjar-Shah is not attested in the Mount Mugh documents.

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In 2008, fragments of paper inscribed in Arabic were found inside the round tower on the upper floor of room 5 located in the north-eastern part of the tower, to the left of the entrance. This room belongs to the second building phase, when the original round tower was expanded and a gallery of several rooms (nos. 3-11) was constructed around it. The floor on which the fragments were found postdates the construction of the walls. During the last phase, the room was filled with dung (which would account for the preservation of the organic material inside it) and probably served as a barn, similar to rooms 9 and 10. Organic remains of textile and wood, including a well-preserved child’s linen shirt (found in room 8), were found on this level. The floor on which the documents and the organic materials were excavated can be dated to the latest occupation phase, i.e., the second half of the 8th century. Unfortunately, no coins were found on this floor, and the pottery in the fill below it and on the floor itself do not allow for a more precise dating. It should be noted, however, that according to the ceramic typology in Panjikent, the assemblage from room 5 corresponds to the end of the 7th and the first quarter of the 8th centuries.

In total, seven paper fragments were found in room 5. Three of these fragments (F1, F2 and F3) are part of one letter (henceforth L1), in which the majority of the first two paragraphs survived (ll. 2-9), as well as several words from the third paragraph (ll. 10-13) [Figs. 5-7]. F4 is the partial beginning of another letter (henceforth L2) [Figs. 8-9], whereas F5 seems to be the end of

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23 See Kurbanov and Teplyakova, “Textile objects”.
24 We would like to thank Pavel Lurje, head of the Panjikent Archaeological Mission, for this information.
The earliest Arabic documents written on paper

a different letter (henceforth L3) [Figs. 10-11]. Only several letters are written on F6 ([ ] [Figs. 12-13]), while F7 contains no text [Figs. 14-15]. It is, therefore, difficult to determine the relation of the last two fragments to the other fragments.

2. Text

Graphic signs used in this edition:

[ ] Square brackets indicate lacunae in the manuscript, in which partly legible letters, words, or phrases are suggested.

( ) Round brackets indicate complementary suggestions for the translation of letters, words, or phrases not written in the original text.

[ [ ] ] Double square brackets indicate deletions by the author.

... Three dots indicate illegible text.

L1

Paper. Three fragments of the same letter: F1 (14 X 6.5 cm.), F2 (14 X 15 cm.), F3 (12 X 12 cm.).

25 Although we cannot totally exclude the possibility that F4 and F5 are part of one letter.

26 We use the following abbreviations of an online database entitled the “Arabic Papyrology Database” (www.naher-osten.lmu.de/apd):
Text

Recto

1. In the name of God, the Merciful, the Compassionate.
2. To Abū [Peace] be upon you. I praise God for your sake,
3. besides whom there is no other god.
4. Now then, may [God] grant us and you success in (achieving) all matters those which are of the rightest and straightest path,
5. I am writing and the amīr, may God honor him, is in the same state and condition and in (a state of) continuity of
6. God's favor upon him, and Abū Masʿūd, may God preserve him, and we, and all our companions,

Translation

Recto

1. In the name of God, the Merciful, the Compassionate.
2. To Abū [Peace] be upon you. I praise God for your sake,
3. besides whom there is no other god.
4. Now then, may [God] grant us and you success in (achieving) all matters those which are of the rightest and straightest path,
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6. God's favor upon him, and Abū Masʿūd, may God preserve him, and we, and all our companions,
The earliest Arabic documents written on paper

149

and our brothers [ ] His grace. Furthermore, even if I spoke at length, may God grant you enjoyment, about what

God placed [ ] from me negligence, for what [ ] for/to you the most exalted and noblest pleasures of repose

and the great truth.

... have come and ... [ ]

our protector and [ ] our clients and [ ]

When your deeds [ ]

It was due to you by [ ]

Verso

1. Abū [ ]

Commentary

Recto

L. 2: [ ] – the writing of the names of the recipient after the basmala is typical of letters dating from the 1st-2nd/7th-8th centuries.29

The visible remains of the letter after šād/dād are a vertical line with a tail inclined to the left. Perhaps these are the remains of the letter alif. Several possible names could be suggested: المصاد (al-Maṣād/al-Muṣād; normally without the definite article),30 المضاء (al-Maḍāʾ),31 المضارب (al-Muḍārib).32 Possible names without an alif: المصرف (al-Muṣaffā/al-Muṣfā),33 المصرح (al-Muṣarrīf),34 المصبح (al-Muṣabbīb),35 المصطبب (al-Muṣṭαb), المصصح (al-Muṣṭafā). We did not find any of these names in the historical sources related to our region and period.

l. 5: [كتبت ككتبت (kuntu katabtu); [كتبت قد كتبت (kuntu qad katabtu).

l. 5: هيته – This form suggested to us by Geoffrey Khan is attested in a few Arabic papyri from Egypt, where the words حَلال and حَياَل follow one another. The form حَياَتِي (لاَيَتِي) is the result of an assimilation of the medial هَام and the doubling of the consonant ي. اثـِـت

l. 5: [نعم] – alternative reading: [نعم]

l. 6: [يـ] – the visible remains of the letter preceding بُاء/تاء/ثُنَاء/ياء may be those of جَيم/حَا/خَيْ. Therefore, two plausible readings may be suggested: خيرة (khayr + personal pronoun - 3.m.sg.gen.; 'the good of it'), خيرة (khabar + personal pronoun - 3.m.sg.gen.; 'his news'). Alternative readings: [امنعه]; [امنعه].

l. 6: اصحابنا – the word seems to be divided into two parts – اصحابا and ونا. This division may be the result of the writer's intention to justify the line and/or by the final 'اَين of the word كتبتب written above (l. 5). Geoffrey Khan suggests that the shape next to the second ال in اصحابا is a combination of the lower part of the final 'اَين from the line above and the first attempt at writing the letter بُاء in proximity to the preceding ال. This division, however, does not occur in similar cases, where the final 'اَين penetrates the next line (l. 6 جميع; l. 7 امتع). Alternative reading: [امنعه]

l. 7: [اضطه] – alternative reading suggestions: [اضطه] وفاضله. The reading وفاضله is less probable since the loop of وَاء is normally rounder than that of the first letter.

l. 7: [اظنت] – the reading is uncertain. The reading اًتَنَبَت seems more likely to us than اًتَنَبَ، although the following phrase is a blessing for the recipient, as the sentence opens with a reference to the sender (ثَعممة ينَي ...). Moreover, according to Grob, "Slide-in-blessings can also appear in the second position slot when no morphological reference to the addressee is present in the first position." Alternative reading: اًتَنَبَت – ٰذَنَ أَتَنَبَت / ٰذَنَ أَتَنَبَت 'I/to you thought', اًتَنَنَ أَتَنَنَت / اًتَنَنَ أَتَنَنَت 'I/to you suspected').

l. 8: [بيننا] (baynānā, 'between us')?

37 See CPR XVI, p. 51.
38 See Blau, Grammar of mediaeval Judaeo-Arabic, §11.iii.b (in Hebrew); idem, Grammar of Christian Arabic, §11.5.2; idem, Emergence, p. 75.
39 Grob, Documentary, p. 35.
The earliest Arabic documents written on paper

مني – it is more likely that the final letter is ياء’ and not نون, as a typical final نون is more curved with a shorter vertical extension (l. 6 ونحن). Alternative reading: مني (ماتأ, ‘when’; see the following comment). The reading حتى (هاتأ, ‘until/in order that’) is less probable, as an initial هاء’ is written differently (e.g., l. 5 ونحن; l. 12 ونحن).

تقصير - alternative reading suggestion (also of the previous word):
مني نقطي (matأ naqأi, ‘when we carry out/fulfill/conclude,’ or perhaps as a question: ‘when will we carry out/fulfill/conclude?’).

كأ - this word may be a verb in the perfect tense with a suffix of the first-person plural.

منع – the reading is not certain. Alternative readings: منع (مانع; ‘prevention, preventing’)? منع (فا-ماع; ‘and with’)?

الفأر (القراءة) – doubtful reading. Alternative readings: القراءة (القراءة) (al-qirأa, ‘the reading’)? الحد (الحد; ‘the justice’)? Perhaps the word is one of the names of اللأه or a variant thereof, as the following word الحق. Geoffrey Khan suggests the reading القراء (al-fawwأz).

l. 10: ...[ ] – one would expect to find the subject after the verb قدام. Geoffrey Khan suggests the reading وصينا (wa-صينا; ‘our legatee; our legal guardian’). Perhaps the reading is وشأ (washأأ; ‘merchant of brocade’). The verb و-شأ (‘and he wanted’) seem less probable in this context.

وسسل – the last letter may be read either as middle لام or as an extended final كاف (cf. اليك, l. 2; اليك, l. 8). The readings وسل, وسل, وسل, وسل are also possible, as سين/شين may be the third or fourth letter of the word, and not the second. The word may therefore be read in various ways, e.g., [ ] وسل, ‘and’; [ ] وسل, ‘road’; [ ] وسل, ‘(he) related you, and (he) attributed you’; وسل+personal pronoun - 2.m.sg.gen., ‘and your lineage’?; وسل, ‘and he entangles/entwines’?

40 We would like to thank the anonymous reviewer for this suggestion.
41 For a discussion of the disappearance of the hamza between homogenous vowels, see Hopkins, Studies, §25a.
42 Ibid.
l. 11: موالينا – read: mawālīnā. Alternative reading: muwālīnā ('our protector').

l. 12: وحسن – alternative reading: (wa-ḥusn; ‘and (your) good (deeds)’). The letter sin, however, is normally written with three teeth (e.g., l. 1.

l. 13: وجب – The reading is not certain. Alternative reading: (wa-ḥaththa; ‘And he urged you to...’). Perhaps this verb is in the optative mood, and is part of a blessing. In this case, it may be translated: “[May god] incite you to...”. It could also be 2.m.sg. imperative (wa-ḥuththi; ‘and hasten to...’). The verb وجة (wajjaha; ‘he sent (to you)’) could also be suggested. This reading, however, is less probable because the normal shape of the connected final ĕāʾ is a loop raised above the line (e.g., l. 3. l. 5. l. 7. In the word Allāh, however, the final ĕāʾ is occasionally represented by a descending stroke (e.g., ll. 1, 6, 7).

Verso

– this may be part of the address, i.e., Abū is the beginning of the kunya of the recipient or of the sender. However, the names in the address normally follow the prepositions li- ('to') or min ('from'), neither of which is attested in our case. The expected form after such prepositions would of course be Abī, as ʾli-Abī in the beginning of the letter (l. 2). It is possible that Abū is part of the name of the bearer of the letter. Another possibility is that the line written on the verso is a later archival note, denoting in brief the contents of the letter or mentioning the names of the sender and the recipient.

63 Although the address was written after the basmala in letters dated to the 1st-2nd/7th-8th centuries, it may have been re-written on the verso. See, e.g., P.Khalili I, docs. 14, 21; CPR XVI, docs. 4, 18; P.BerLArab. II, docs. 23, 25, 75.

64 There are many instances, however, in which the form Abū is attested instead of Abī. See Hopkins, Studies, §162a.
The earliest Arabic documents written on paper

L2 (F4)

Paper. 5.3 X 14 cm.

Text

Recto

1. [بِسْمَ الله الرحْمن الرحْمَنِ] [بِسْمَ اللَّهِ الرَّحْمَنِ الَّلَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ] [بِسْمَ اللَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ]

2. سَلَّمُ عَلَيْكُمْ فَاطِمَةُ ابْنَاهُ امْرَاطَةُ [بِسْمَ اللَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ]

3. [اللَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ] [أَما بَعْدَ عِنْدَ اللَّهِ وَآيَاتَهُ [بِسْمَ اللَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ]

4. [عَافِيَةُ (؟) فَاطِمَةَ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ]

5. [بِسْمَ اللَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ]

Verso

1. [بِسْمَ اللَّهِ الَّذِي لَا إِلَهَ إِلَيْهِ يُصِبِّرُ]

Translation

1. [In the name of God, the Merciful, the Compassionate.]

2. [From Yahyaa to Peace be upon you. I praise]

3. [God for your sake,] besides whom there is no other god.

4. [Now then,] may God grant you the best of His well-being(?)

5. [those with us]

Commentary

1. 2: [بِسْمَ (؟) بِسْمَ (؟) بِسْمَ (؟)] - it is difficult to estimate the space between the words and I wish I had more information. The first word in the first line (بِسْمَ (؟)) may help us in this matter. If the sin in اسم was extended, several words might be written in the second line before the name. The beginning of the line could be, e.g., من فلان بن يحيى. If the sin was not extended, or extended to a small degree, the beginning of the second line might be shorter, e.g., من أبي or من ابن يحيى.

انّي - it is possible that the first letter of the word after the preposition ilâ is alif. If so, it may be the beginning of Abi, Ibn or a certain ism.

45 See Grob, Documentary, pp. 188, 191-192.
l. 4: Alif maqṣūra may be preserved as yāʾ before the pronominal suffix -nā. Another possibility is that the word was written with scriptio defective of the medial ā: ...-

- this reconstruction is based on the appearance of this phrase in several Arabic papyri listed by Diem.

L3 (F5)
Paper. 16 X 5 cm. The verso is blank.

Text

1. [ ] ...
2. [ ] ... [ ]
3. [ ] ...

Translation

1. [ ] ... [ ]
2. [ ] may God grant us and you success [ peace be upon you]
3. [ ] and the mercy of God

Commentary

l. 1: كن عند ... آنا - perhaps this كن is part of a 2.m.sg. short imperfect form or imperative of the verb kāna: 1) كن (takun); 2) فکن (fā-kun).

عند - alternative reading: غير (ghayr).

- we were unable to decipher this portion of the text. The shape of the letters following عند may be كن عند. Possible readings are غرتک (ghirratika, 'your inadvertence'), عزتك (ʿizzatika, 'your glory'), غرتک (ghurratika, 'your best'), عز بك (ʿizz bika, 'glory in/by you').

It is possible that there is no deletion in the middle of the line, but rather an ink smudge at the end of the word ending with final yāʾ with a horizontal extension to the right.

- This final yāʾ may denote the genitive.

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46 Hopkins, Studies, §12f.
47 Ibid., §10c.
enclitic pronoun. In that case, the line may contain a phrase similar to fa-kun ʿinda alṣan ẓanni bīka (‘live up to my best opinion of you’) or variants thereof, which are attested several times in Arabic official correspondence.\(^4\) Perhaps it should be read as عرضي (i̇rdi; ‘my honor’)? عزتي (i̇zzati; ‘my glory’)?

3. Script

Some of the forms in these texts are typical of the first two centuries AH.\(^5\) The use of these forms, however, is not always consistent, and they are written alongside more cursive forms, which are considered characteristic of later centuries.\(^6\)

Below are some prominent features of this script:\(^7\)

1. The foot of the independent alif normally bends to the left (e.g., L1:2 ʾ阿拉伯; L1:4 ʾاما; L2:3 ل).\(^8\) There are no instances of an independent alif that bends to the right at the bottom, which is well attested in early papyri.\(^9\) The final alif usually extends below the connecting stroke and bends to the left (e.g., L1:7 ىايوالك; L2:4 ىامينا; L1:11 ىاحماننا).

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\(^4\) For the full list, see Diem, P.Vind.Arab I, p. 272.
\(^5\) For the archaic features of the script in Arabic papyri dated to the 1\(^{st}\)-2\(^{nd}/7\(^{th}\)-8\(^{th}\) centuries from Egypt (henceforth ‘early papyri’), see P.Khalili I, pp. 27-39. For the archaic features of the script in Arabic documents dated to the middle of the 2\(^{nd}/8\(^{th}\) century from Khurāsān (henceforth ‘Khurāsān corpus’), see P.Khurasan, pp. 67-71.
\(^6\) For the cursive tendencies in Arabic papyri, see P.Khalili I, pp. 39-43. For the Khurāsān corpus in particular, see P.Khurasan, pp.71-80. The term ‘cursiveness’ and the difficulty in dating documents according to cursive developments is discussed in Grob, Documentary, pp. 159-165; idem, “A catalogue,” pp. 125-128.
\(^7\) In our analysis of the shapes of the letters, we adopt the terminology used in P.Khalili I, pp. 27-39; P.Khurasan, pp. 67-71.
\(^8\) This shape of alif is also typical of the Arabic letter from Mount Mugh (dated to 100/718-719), see Krachkovskaya and Krachkovskij, “Drevnejshij,” p. 83. The script analysis in P.Khurasan does not include a discussion of this independent alif. Khan, however, states that there are no instances of an independent alif bending to the right in the Khurāsān corpus. See P.Khurasan, p. 70.
\(^10\) This feature is not unique to early papyri. It is also attested throughout the 3\(^{rd}/9\(^{th}\) century. See Grob, “A catalogue,” p. 131.
2. The shape of dāl/dhāl with an upward bend at the top is attested once (L1:7 ذكر). However, this shape usually has no bend (L1:4 بعد), and in certain instances it is only slightly curved and with no horizontal stroke, which makes it very similar to the shape of rāʾ/zāy (e.g., L1:4 بعد).57

3. The shape of sād/dād is horizontally extended once (L1:12 صنيعك). In other instances, the extension is reduced and the loop is rounder (e.g., L1:7 فضله).58

4. The horizontal stroke of the initial ʿayn/ghayn is extended to the right (e.g., L1:6 عليه).59

5. The initial kāf is extended and the upper stroke is parallel with the lower horizontal (e.g., L1:4 كلها; L1:5 كتبت; L1:7 ذكر; perhaps also L3:1 أفـ).60 The final kāf has an oblique upper stroke slanting to the left (e.g., L1:7 وك; L1:8 وك; L3:2 ولوك).61

6. The tail of the final mīm is very short (e.g., L1:1 يسم; L1:9 العظيم).62

7. The tail of the final or independent yāʾ is horizontally extended to the right (e.g., L1:2 إلى; L2:2 إلى; L2:4 إلى).63 except for one instance where it apparently bends to the left (L1:8 إلى).64

There are no diacritical dots in these texts, except perhaps for one instance of two dots below yāʾ (L1:9 العظيم).
It seems that the Sanjar-Shah letters and the Arabic letter from Mount Mugh have few paleographical features that would distinguish them from early Arabic papyri, except for the fact that the independent alif in the former does not bend to the right. In some cases, the script of the Arabic letter from Mount Mugh differs quite considerably from those of the Sanjar-Shah letters. For instance, in the Arabic letter from Mount Mugh, the final ya‘ usually bends to the left, whereas in the Sanjar-Shah letters it is horizontally extended to the right. Another example is that the tail of the final mim is very short in the Sanjar-Shah letters, while it is longer in the Arabic letter from Mount Mugh.

4. Commentary

The opening formula of L1 (ll. 2-3) and L2 (ll. 2-3), i.e., writing the name of the sender and the recipient, as well as the phrase salāmū ‘alayka fa-‘innī aḥmadu ʿalayka Allāha alladhi lā ilāha illā huwa, is typical of the 1st/7th and 2nd/8th centuries.66 Some of the script features are also characteristic of the first two centuries AH, as seen in the Script section above. On account of their formulaic structure and script, it is impossible to determine more precisely when these letters were composed. We cannot say whether they are contemporaneous with the Arabic letter from Mount Mugh (dated to 100/718-719) sent by the Sogdian ruler Dhēwāshōṭ to al-Jarrāḥ b. ʿAbd Allāh, the governor of Khurāsān (99-100/718-719), or if they are earlier or later.67 Since the first activities of the Arabs in the region of Panjikent are dated to 102-103/721-722, this is the terminus post quem for the Sanjar-Shah letters. Sanjar-Shah was probably abandoned shortly after Panjikent, in the 780s, thus dating our letters to sometime between 102-103/721-722 and the 780s (163-173 AH).

66 Grob, Documentary, pp. 39-40. For a list of letters with this formula, as well as with the names of the sender and the recipient, see P.Khūlī I, pp. 126-127.
67 Krachkovskaya and Krachkovskij, “Drevnejšij,” pp. 52-90. The precise date for this letter was established by V.A. Krachkovskaya and I. Yu. Krachkovskij based on historical information contained in it.
Unfortunately, the names, or in most cases fragments of names, preserved in the Sanjar-Shah letters do not allow us to equate the correspondents with any known historical characters. A significant lacuna in the second line of L1 means that the name of the sender does not appear, and only the beginning of the recipient’s kunya has survived (لابي لابي المصت). Two more persons are mentioned in L1: Abū Masʿūd (l. 6) and the amīr (l. 5). So far, we have been unable to find a person by the name of Abū Masʿūd who was active in Sogdiana during the 2nd/8th century.

The title amīr was primarily used for high-ranking officials, such as commanders of armies and provincial governors. This term is attested several times in the documents from Mount Mugh. It is the title of al-Jarrāḥ b. ‘Abd Allāh, in the Arabic letter. In the Sogdian document 1.I. sent to Dhēwāshtīch on behalf of the Arabic commander ʿAbd al-Rahmān b. Ṣubḥ, the title amīr (xmyr) occurs nine times. In one instance (Mugh, 1.I, 17), amīr is followed by sytt (xmyr sytt), which is probably a Sogdian transcription of the Arabic name Saʿīd. In such a case, it probably refers to one of the following governors of Khurāsān: Saʿīd b. ʿAbd al-ʿAzīz, who was nicknamed al-Khudayna (102-103/720-721), or to his successor, Saʿīd b. ‘Amr al-Ḥarashī (103-104/721-722). However, this title was apparently not exclusive to high-ranking officials during the Umayyad period, but also applicable to individuals whose position in the administrative or military hierarchy was lower. For example, the first occurrence of the title amīr in Mugh 1.I. may refer to ʿAbd al-Rahmān b. Ṣubḥ, whereas the later ones refer to the governor of Khurāsān. In the Arabic documents dated to the middle of the 2nd/8th century from Khurāsān, the title amīr was used for local regional governors. According to Ţūrīkh-i Bukhārā, Warqāʾ b. Naṣr al-Bāhilī was appointed the amīr of Baykand after the city was conquered by Qutayba b. Muslim (d. 686).
96/715) in 88/706. It is thus possible that the ḍimār in L1 was not a provincial governor, such as the governor of Khurāsān, but a lower-ranking official, such as a governor of a town or a region, or the commander of an outpost or of an army unit.

The lacuna at the beginning of the second line of L2 leaves us only with the end of the sender’s name – Yahyā. In accordance with the formulaic structure of Arabic letters of that period, the line must have begun with the word min. As stated above, we cannot determine the length of this lacuna. The first words of the line might have been [min ḏibn] Yahyā ilā [...], [min Abī] Yahyā ilā [...], or [min Fulān bīn] Yahyā ilā [...], depending on the distance between the words min and Yahyā. It is possible, of course, that a certain title preceded the sender’s name.

The name Yahyā may be either the nasab (patronymic) or part of the kunya of several individuals who were active in Sogdiana during the 2nd/8th century. 75

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74 Narshakhī, Bukhārā, p. 53.
75 It is difficult to determine whether the sender identified himself by his ism and nasab or by his kunya, although the former option is more likely. The kunya, and not the ism, was the honorific and proper way to address equals or superiors from the 2nd/8th century onwards (see Beeston, “Background details”, p. 19; Schimmel, Islamic names, pp. 4-5). The importance of writing the kunya of the addressee, along with his ism and nasab, is also attested in a private letter from Egypt dated to the 3rd/9th century (see Diem, “Three Arabic documents”, pp. 18-19 with references). However, it seems that it was not so customary for the sender to identify himself in letters by his kunya (see Schimmel, Islamic names, p. 4). Later sources discuss this matter. Al-Qalqashandi’s (d. 821/1418) work Subḥ al-ašbā fi sināʿat al-insāb presents the opinions of Abū Zakariyyā Yahyā b. Sharaf al-Nawawi (d. 676/1277) and Abū Jaʿfar Aḥmad b. Muḥammad al-Nabhās (d. 338/949) on this matter. According to al-Nawawi, a person should not give his own kunya unless he is better (or only) known by it. Al-Nabhās states that if a person is better known by his kunya, he may use it when writing to equals. However, when writing to superiors, a person should state his ism and add “known as Abū Fulān” (see al-Qalqashandi, Subḥ, vol. 5, p. 410). One of the sections of the work Tuhfah al-umara’ fi taʾrīkh al-wuzara’ by Hilāl b. al-Muḥassin al-Ṣābi’ (d. 448/1056) lists forms of address and blessings used by al-Muṣṭad jars waṣir, Abū al-Ḥasan ‘Alī b. Muḥammad Ibn al-Furāt (d. 312/924), in his cor-correspondence with various rulers, governors, and state officials. It seems that in several letters sent to officials and courtiers, Ibn al-Furāt identifies himself in the address section by his kunya (‘from Abū al-Ḥasan’, min Abī al-Ḥasan). However, when writing to members of the caliphal family, and in one case to the Sāmānī ruler Naṣr b. Aḥmad (301-331/914-943), he does not use the kunya, but rather his ism and nasab (“from ‘Alī b. Muḥammad”, min ‘All b. Muḥammad). Ibn al-Furāt apparently used his kunya in correspondence except when writing to those superior to him, particularly members of the caliphal family (see al-Ṣābi’, Tuhfah, pp. 172-178; we are grateful to Michael Lecker for drawing...
The nasab of four ‘Abbāsī officials was Yahyā. The first two are Jibrāʾīl b. Yahyā al-Bajali, the governor of Samarqand (appointed in 159/775) during the revolt of al-Muqanna’a (d. 163/779 or later), and his brother Yāzīd. The two brothers are mentioned together by Gardīzī (mid-5th/11th century) and Ibn al-Athîr (d. 630/1233). According to both sources, they were sent by al-Mahdî to fight the Whiteclothed Ones (ṣapīd-jaʿmaqān, mubayyida) in Bukhārā. Yāzīd also appears in Tārīkhnāma-yi Baʿṣamī, where it is told that he was attacked by al-Muqanna’a’s supporters, as a result of a planned ambush by a certain diḥqān in/of Ḥajdân(?), after he was asked by al-Muqanna’a to devise a ruse to make Jibrāʾīl leave Samarqand. Yāzīd eventually dies in a ruined fortress (kāshk-i wūrān) near the battlefield. The third official is al-Ashʿath b. Yahyā al-Ṭāʾī, who is one of the duʿāt of the ‘Abbāsī revolution and a partisan of the ‘Abbāsīs during the revolt of ‘Abd al-Jabbār b. ‘Abd al-Raḥmān al-Azīd in 141/758. In the autumn

our attention to this source). In early Arabic papyri, the kunya of senders are occasionally attested in the address. E.g., P.Mird, doc. 69 (1/7th century); P.Jahn, doc. 9 (2nd/8th century); CPR XVI, doc. 12 (3rd/9th century; the information was taken from the Arabic Papyrology Database, www.naher-osten.lmu.de/apd). The fact that senders sometimes identified themselves by their kunya in the address does not imply that it was customary. Discussing the possible reasons for the use of the kunya in private correspondence is beyond the scope of this study. There are many instances in which the sender’s kunya does not appear in the address, but rather his ism and nasab.

Some of the data used here concerning the following individuals is taken from the online database entitled “The Prosopography of Early Islamic Administration” (http://micro5.mscu.hji.ac.il:81/IPP/v3/).

For more details concerning Jibrāʾīl’s activity in Transoxania, see Karev, Samarqand, pp. 170-197.

Crone and Jazi, “Muqanna’ II”, p. 386 with references.

For an edition and translation of this account, see Crone and Jazi, “Muqanna’ I”, pp. 165, 173. See also the discussion of this account, Karev, Samarqand, pp. 185-186. According to Crone and Jazi, Ḥajdân is a toponym, although most manuscripts understand it as the diḥqān’s name. See Crone and Jazi, “Muqanna’ II”, p. 386. In Karev’s opinion, it is more likely that Ḥajdân is a personal name rather than a place-name. However, if it is indeed a toponym, it may be read حجدان (Jakhzan), a settlement situated three farasaks from Samarqand. See Karev, Samarqand, p. 186.


The name attested in al-Balādhuri’s Ansāb al-ashrāf is al-Ashʿath Abū Jābir b. al-Ashʿath al-Ṭāʾī. See al-Balādhuri, Ansāb, vol. 3, p. 260. According to both Karev and Crone, the nasab is wrong and this person must be al-Ashʿath b. Yahyā. See Karev, Samarqand, pp. 145, 154; Crone, Nativist prophets, p. 116, no. 67. Karev further notes that the fact that al-Ashʿath b. Yahyā had a son called Jābir strengthens the possibility that al-Ashʿath Abū Jābir b. al-Ashʿath al-Ṭāʾī mentioned by al-
of 141/758, al-Ash‘ath leaves Ishtīkhān for Bukhārā, where he kills the governor appointed by ‘Abd al-Jabbār. Moreover, al-Ash‘ath milled coins in 143/760–761 (Bukhārā) and in 144/761–762 (Samarqand) on behalf of the heir apparent to the caliphate at that time, al-Mahdī Muḥammad b. al-Manṣūr. The fourth official is Sa‘īd b. Yaḥyā, one of du‘āt al-du‘āt of the ʿAbbāsīs and the local governor of Shāsh, who milled fils coins in 149/765–6.

Two of the governors of Khurāsān in the 2nd/8th century had the kunya Abū Yaḥyā: Junayd b. ʿAbd al-Raḥmān al-Murrī (111–116/729–734) and Sa‘īd b. Ṭabarī. If the sender of L1 is indeed Sa‘īd b. Ṭabarī, then the letters should be dated to 102–104/721–723 and are closely related to his campaign in Sogdiana, which is also reflected in the Mount Mugh documents.

Balādhurī and al-Ash‘ath b. Yaḥyā who appears on the legend of a fals coin from Samarqand (dated to 144/761–762), are the same person. See Karev, Samarqand, pp. 153–154.

82 Ibid., p. 145.
83 Karev, Samarqand, p. 152; Crone, Nativist prophets, pp. 115–116.
84 Ibid., p. 155.
85 Ibid. and relevant references there.
86 Ibn ʿAsākir, Taʾrīkh, vol. 11, p. 322. For al-Murrī’s involvement in Transoxania, see Gibb, Arab conquests, pp. 72–76.
88 Interestingly, an account in al-Ṭabarī suggests that Sa‘īd b. Ṭabarī was used the kunya of the addressee in correspondence, albeit in an inappropriate manner. According to this account, which is one version of the events that led to al-Ḥarashi’s dismissal by ʿUmar b. Hubayra, the governor of ʿIrāq (103–105/721–724), al-Ḥarashi treated Ibn Hubayra’s orders with contempt. He also used Ibn Hubayra’s kunya, Abū al-Muthannā, when referring to him in conversation or addressing him in correspondence, without the title al-amīr (see al-Ṭabarī, Taʾrīkh, II, pp. 1453–1454; for the English translation, see al-Ṭabarī, History, vol. 24, p. 183). The omission of the title al-amīr is more likely to have offended Ibn Hubayra than the use of his kunya. In another account reported by al-Ṭabarī, al-Ḥarashi and Ibn Hubayra meet on the shore of the Euphrates and converse. During their conversation, al-Ḥarashi addresses Ibn Hubayra as Abū al-Muthannā. In this context, it does not seem plausible that the kunya is used as a sign of disrespect (see al-Ṭabarī, Taʾrīkh, II, p. 1456; for the English translation, see al-Ṭabarī, History, vol. 24, pp. 185–186). We thank Michael Lecker for clarifying the historical and social context of the accounts concerning al-Ḥarashi and Ibn Hubayra.
Although it is impossible to equate any of the names mentioned in the letters with actual historical characters active in Sogdiana during the 2nd/8th century, the letters may have been part of a correspondence between Arab forces. The mention of the amīr, a certain Abū Masʿūd, “our companions” and “our brothers”, may suggest that the letter was sent by someone who was part of an Arab force under the command of the amīr. The recipient of L1 may have been an Arab commander of a garrison situated at the site of Sanjar-Shah. The style of L1 and the use of phrases such as “our companions” and “our brothers” makes it less likely that the recipient was a Sogdian ruler or official.

**Paper**

In contrast with the Arabic letter from Mount Mugh, which is written on leather, the letters from Sanjar-Shah are written on paper. Paper was invented in China around the 2nd century BCE, but it took a significant amount of time before its use spread to Central Asia. The Sanjar-Shah letters are written on Chinese paper. According to the oft-repeated story by Thaʿālibi (d. 429/1039), paper was introduced to the Islamic world by Chinese papermakers taken prisoner after the battle of Ṭalās in 133/751. They went on to set up Samarqand’s paper production industry for which the city became renowned in the Muslim lands. We know, however, that paper was used in Sogdiana at least from the beginning of the 2nd/8th century and probably even earlier, as shown by the Mugh documents. By the 2nd/8th century, the Sogdians had been acquainted with paper for some 400 years, having made use of it already in the early 4th century CE, as shown in the so-called “Ancient Letters” – a group of five letters written in the Sogdian language discovered in 1907 by Aurel Stein near Dunhuang. Unfortunately, the fact that the paper of the Sanjar-Shah letters was produced in China cannot be taken as a chronological indicator, since it is possible that the

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90 See Appendix.
92 Sims-Williams, “Ancient letters.”
import of Chinese paper to Sogdiana could have continued even after the commencement of paper manufacturing in Samarqand in the second half of the 2nd/8th century.

The Mugh archive contains a letter written in Sogdian on paper by ʿAbd al-Rahmān b. Ṣubh to Dhēwāstich, which suggests that the Arab newcomers used paper upon their arrival to Sogdiana. The fact that we now possess the fragments of at least three letters all written on paper provides further evidence that the use of paper by the Arabs in Sogdiana was already widespread in the 2nd/8th century.

Before the discovery of the Sanjar-Shah letters, the earliest Arabic documents written on paper were those dated to the 3rd/9th century. These are a fragment containing the beginning of the Thousand Nights from Egypt,⁹³ and five fragments of Arabic texts from Khurāsān currently kept in Berkeley.⁹⁴ This makes the fragments from Sanjar-Shah the earliest surviving Arabic texts written on paper.

**Conclusions**

Despite the fact that the preserved fragments of the Sanjar-Shah letters contain little historical information, they nevertheless represent a new source for the history of Sogdiana in the 2nd/8th century. More precisely, their date should be placed between 102-103/721-722 and the 780s (163-173 AH).

Unfortunately, it is impossible to equate any of the names mentioned in the letter with actual historical characters active in Sogdiana in this period. The letters may have been part of official communication between high-ranking officials, as the Arabic letter from the Mugh archive. The mention of the amīr, a certain Abū Masʿūd, ‘our companions’ and ‘our brothers’, may suggest that this was correspondence between the Arab commander of the Sanjar-Shah garrison and commanders of other Arab forces in the region.

The earliest known Arabic documents written on paper, the Sanjar-Shah letters also shed light on the use of paper by the Arabs in Central Asia

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⁹³ Bloom, *Paper before print*, pp. 58-59, Fig. 26.
⁹⁴ Khan, “Arabic paper fragments”.
in the 2nd/8th century, which was much more common and probably also earlier than hitherto assumed.

Appendix: Paper analysis
(Anna-Grethe Rischel and Michelle Taube)

Macroscopic and microscopic analyses of paper are nearly non-destructive methods for collecting data about the origins of the paper. Much information is to be found through observation of the paper, where traces of the papermaking technology and the condition and origin of the fibre materials contribute to a possible definition of the provenance and origin of the paper. Comparative analysis with a reference sample of paper of known origin and technology serves as a key for the identification of the fibre materials and technology of the unknown paper sample. This analysis is built entirely on macroscopic and microscopic analyses of the paper fragment received [Fig. 16].

Macroscopic observation
No traces of text are present on the fragment which measures 10.5 cm in height and 4.1 cm in width. The colour of the paper is yellowish-white except for a darker portion on the left side of the reverse. The condition of the fragment is good except for the mechanical damage of the torn edges and tears. The surface of the opaque and thin paper is smooth and mat, but without visible traces of a coating or a sizing that, according to my analysis of 12th century paper manuscripts from Egypt, is characteristic of Arab paper.

In raking light a very weak impression of parallel laid lines (19/3 cm) from a woven screen is visible. This illustrates that the papermaker used a mould with a flexible, loose-lying screen of reeds in the sheet formation process. Closely lying laid lines (9-20/3 cm) illustrate that the papermakers’ screen is woven of slightly irregular reeds available everywhere. If the number of laid lines surpasses 20/3 cm, I consider the screen to be made of even and thin bamboo splits; this would point to a provenance in a region with a natural growth of bamboo. In transmitted light, a dominant fibre direction and slightly cloudy fibre distribution can be observed. Seven tiny
samples for microscopic analysis were collected from the fragment. The positions of these samples are marked on the 1:1 tracing of the fragment [Fig. 17].

Microscopic observation

For light microscope observation of the separated individual fibres using an OLYMPUS BH2 polarisation microscope (POL), samples No. 1 and No. 2 were picked out from the edges of the fragment and No. 3 and No. 4 from the obverse and reverse surface of the paper. Samples No. 5 and No. 6 were selected for scanning electron microscope observation of the undisturbed surface of the obverse and reverse of the paper and No. 7 for observation of the fibre directions in cross-section.

Electron microscopy was performed with a HITACHI S-3400N Scanning Electron Microscope (SEM) equipped with two Bruker XFlash 6130 energy dispersive x-ray detectors (EDS). SEM images were taken using a backscattered electron detector, which gives an indication of the composition of the material being investigated: materials with lower atomic mass (e.g., fibres) appear darker while heavier materials (e.g., inorganic fillers) appear brighter.

In the preparation of the permanent specimens Nos. 1, 2, 3, 4, a single drop of cold water was used to dissolve the tiny samples of paper. The material was then distributed, using needles, into an even layer of individual fibres on the slides. The samples were easily dissolved in long, thin fibres and not, as expected, in the shorter fragments of fibres characteristic of Arabic and Central Asian rag paper as well as European rag paper made from recycled textile fibres. When dry, each specimen was sealed with a drop of Canada balsam before the cover slip was added.

Specimens Nos. 5, 6 and 7 were mounted on aluminium SEM stubs using carbon tape. The samples were not treated or coated before SEM observation of the undisturbed surfaces and structure of the paper, including the particles present among and on the fibre material.

POL observation and analysis, objective S Plan Apo 20

The condition of the separated individual fibres without heavy fibrillation and without frayed fibre ends illustrates that a chemical maceration
combined with a short mechanical pounding process were used in the preparation of the plant fibre material. Only one type of smooth bast fibres of slightly varying width is present [Fig. 18]. Diagonal cross marks and dislocations are characteristic for this type of bast material which also has narrow and irregular lumen [Fig. 19]. Fibres with transparent membranes are now and then observed [Fig. 20]. Crystals, both single prismatic-shaped and clusters of small star-shaped, are present among the fibres. These crystals occur naturally in the plant. Tiny particles from the burial environment are also present [Fig. 21] and [Fig. 22].

The fibre material consists of pure new mulberry bast fibres without the addition of other fibre materials according to all observation. This corresponds with the identification of mulberry fibres from paper by a combination of distinctive features: i) loosened primary wall, irregularly spaced cross marks; ii) narrow irregular lumen; iii) well preserved tapering fibre ends; iv) presence of cluster crystals and prismatic crystals, lack of other associated cells [1].

**Scanning Electron Microscope HITACHI S-3400N, observation and analysis**

Observation of the undisturbed surface structure of the obverse of the paper [Fig. 23] gives the impression of a smooth burnished paper surface of fibres in an even layer. Tiny particles of various shapes are present among the fibres. According to elemental analysis, some of the particles are calcium carbonate, while others contain elements which are found in soil, clay, or sand [Fig. 24]. There are no visible traces of a surface treatment like sizing or coating, which would be used to make the paper fit for writing. The calcium carbonate particles observed might have been added to the pulp before the sheet formation in order to increase the opacity and whiteness of the thin paper.

There is a difference in structure between the obverse and reverse surfaces of the paper [Fig. 25]. Thicker fibres are gathered in an irregular three-dimensional layer on the reverse where, in addition, fewer particles are present. That no burnishing seems to have taken place on the reverse indicates that the paper was produced for writing only on the obverse of the thin, opaque paper.
The earliest Arabic documents written on paper

Traces of the sheet formation
The fibre direction and fibre distribution within the paper can be studied in transmitted light, but the papermaker’s scooping of the pulp and distribution of the fibres are only visible in a cross section of the paper. A random distribution of fibre ends and fibre lengths illustrates that only one scooping has taken place, whereas layers of regularly crossing fibre ends and fibre lengths (similar to plywood) document that more than one scooping has been used as illustrated here [Fig. 26]. The papermaker has distributed the fibres for the first and third scooping of the pulp by shaking his mould forward and back, but from side to side for the second one. This distribution of perpendicular layers results in an increased strength of thin paper.

The origin and provenance of the fragment
The oldest dated Chinese manuscripts on paper consist of a mixture of recycled ramie, hemp, and flax fibres from rags. Sometimes, mulberry fibres were also added, according to my analysis of Central Asian paper from the Turfan Collection in Berlin. The Chinese invention in the first millennium CE of chemical maceration of plant material for papermaking resulted in the production of paper qualities of pure new bast fibres in the regions where mulberry plants and other plants from the Moraceae and Thymelaeaceae families were available to the papermakers. This technological development spread in the 7th century CE from the Chinese empire to the eastern and northern neighbouring countries which had access to similar plants. The original use of rag fibres for paper production continued in the Central Asian regions without access to mulberry plants. It was this rag production technology that the Arabs learned about in the 8th century CE and quickly employed to produce their own paper. The Arabs had hitherto used pen and ink as their writing tools on parchment. Heavy starch sizing, eventually combined with coating of the Arab paper, was therefore needed for the continued use of these writing tools.

If the paper fragment of the Arab manuscript consisted of a mixture of recycled textile fibres, it would indicate either a Central Asian origin or an Arabic origin, especially if heavily sized with starch or coated. If the paper,
however, consisted of pure new bast fibres, it would indicate a Chinese origin.

This paper fragment from the Arabic manuscript appears to be of Chinese origin according to the macroscopic and microscopic analyses. The choice of fibre material of pure mulberry fibres and the technology used in sheet formation to create layers of crossing fibres document that Chinese paper was available through export and that this paper was used as a writing material for the Arabic manuscript.

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The earliest Arabic documents written on paper


The Arabic Papyrology Database, available online at: www.naher-osten.lmu.de/apd

Fig. 1. Map of the Upper Zeravshan Valley.
Courtesy of Pavel Lurje and Alexey Akulov.
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Fig. 2. Plan of Sanjar-Shah showing excavated areas.
Drawing by Alexey Akulov.
Fig. 3. The Round Tower (Area 1), 2009.
The earliest Arabic documents written on paper

Fig. 4. Plan of the Round Tower (Area 1).
Drawing by Alexey Akulov.

Fig. 5. Letter 1 (F1, F2, F3), Recto. Photo by Anastasia Chizhova.
Fig. 6. Letter 1 (F1, F2, F3), Verso. Photo by Anastasia Chizhova.

Fig. 7. Letter 1, Verso (upper fragment). Photo by Anastasia Chizhova.
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Fig. 8. Letter 2 (F4), Recto. Photo by Anastasia Chizhova.

Fig. 9. Letter 2 (F4), Verso. Photo by Anastasia Chizhova.
Fig. 10. Letter 3 (F5), Recto. Photo by Anastasia Chizhova.

Fig. 11. Letter 3 (F5), Verso. Photo by Anastasia Chizhova.
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Fig. 12. F6, Recto. Photo by Anastasia Chizhova.

Fig. 13. F6, Recto. Photo by Anastasia Chizhova.
Fig. 14. F7, Recto. Photo by Anastasia Chizhova.

Fig. 15. F7, Verso. Photo by Anastasia Chizhova.
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Fig. 16. Fragment of paper used for analysis.
Fig. 17. Tracing 1:1 of the fragment with notes.
The earliest Arabic documents written on paper

Fig. 18. Specimen 2, smooth fibre of slightly varying width with irregular lumen.

Fig. 19. Specimen 2, smooth fibres with cross marks and dislocations.
Fig. 20. Specimen 1, fibre with transparent loose primary wall, cross marks and dislocation.

Fig. 21. Specimen 2, fibres with dislocations, cross marks and prismatic crystals to the left of the fibre.
The earliest Arabic documents written on paper

Fig. 22. Specimen 1, fibre with loose primary wall together with cluster crystals (bottom left) and tiny particles throughout.

Fig. 23. Specimen 5, the undisturbed structure of the obverse surface with an even layer of fibres and various particles.
Fig. 24. Specimen 5, elemental analysis from the obverse surface of the entire region.

Fig. 25. Specimen 6, the undisturbed structure of the reverse surface with a less even layer of fibres and fewer particles present.
The earliest Arabic documents written on paper

Fig. 26 Specimen 7, the layers of cut fibres crossing long fibres illustrate the different movements of mould in the sheet formation process.