

# Scratching the surface: how Islamic glass bangles might offer a window into trade, culture and identity across the historic Islamic World

Charlotte Nash

**Islamic glass bangles have been found in vast quantities at many Islamic sites across the Middle East, with a notable increase during the 13th–18th centuries (Spaer 1992). It is no surprise, considering the complex and vast trade networks of the Islamic World, that such a wide range of designs represent cultural exchange and regionality. It is how to expertly recognise and record these differences to enable insights into their origins and dissemination that has proven more elusive.**



Map showing Sīrāf on the Persian Gulf. Credit: Nash, C.K.

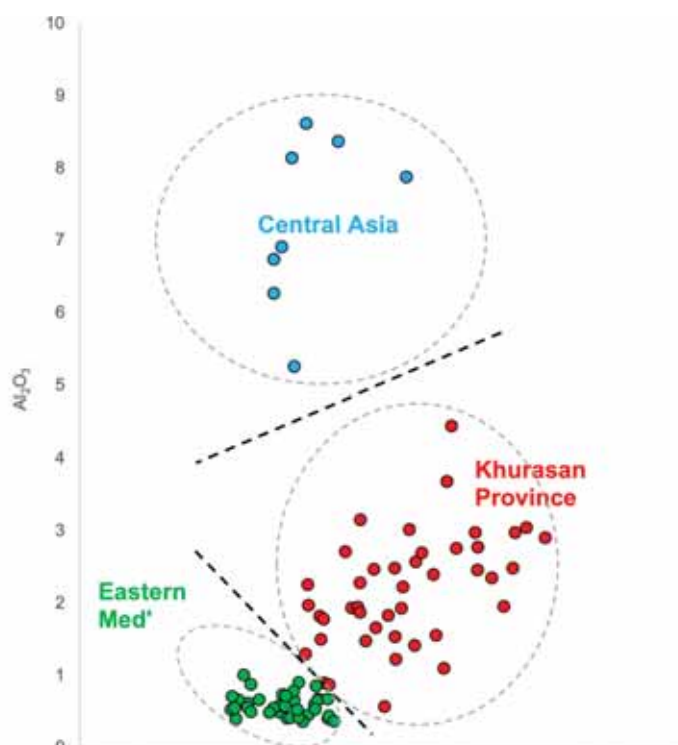
## Into the melting pot

Such a mammoth task goes well beyond the scope of a single PhD; nonetheless, initial methodological stages need to be established to enable future researchers to realise important cultural insights. The first challenge is to build a robust typology that can capture subtle differentiations between main types, as well as finding collections with good chronological context.

Islamic glass is one of the least understood and most complex of historic glass types, spanning vast periods of time and places. However, many great advances in analytical equipment and compositional understanding have made such a study possible. By analysing the bangle fragments using Scanning Electron Microscopy (SEM) and Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS) analysis, and comparing the chemical datasets with other known glasses from the Middle East, likely geographical regions for the primary production can be gleaned. This, compared with typological information, informs on links between styles and glass signatures.

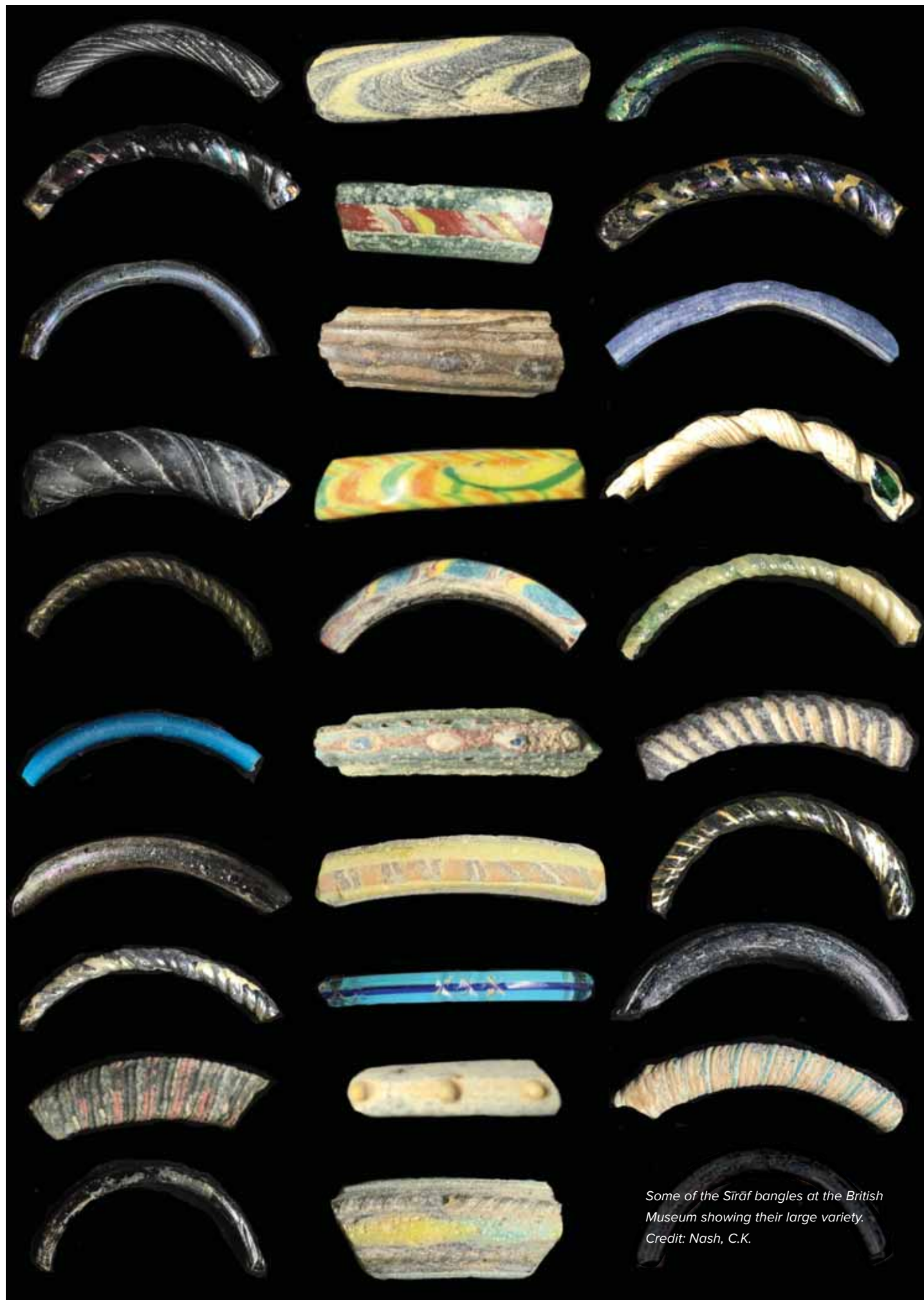
## Through the looking glass

Although studies on specific collections and some regions exist, the Persian Gulf remains arguably the least understood. The excavated Sīrāf collection at the British Museum (Whitehouse 2009) dated between the 13th and 16th centuries serves as the primary case study for this research. Building on the work of Spaer (1992) and particularly Shindo (1996), a detailed master typology has been developed to categorise subtle manufacturing differences into multiple sub-types. Inspired by similar archaeometric studies (see Boulogne and Henderson 2009), scientific analysis was undertaken to help identify chemical signatures and likely production regions, revealing potential links between styles and provenance.



Chemical analysis shows regional similarities to known Islamic glass groups. Credit: Nash, C.K.

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*Some of the Siraaf bangles at the British Museum showing their large variety.  
Credit: Nash, C.K.*

Colour groupings for the styles and provenance were also observed and compared to establish connections between colours, styles, periods and provenance. This data has formed the basis for identifying regional practices across the Islamic World and possible trade networks. It is the first step on what will be a very long and winding road, but one that has already yielded exciting preliminary results.

### Clarifying the opaque

Over 100 glass bangle fragments were analysed, indicating three major regions for imported glass but only three local glass fragments. All were a typical soda-lime-silica composition, employing plant-ash as fluxing agent.

The main group appears similar to the Nishapur B coloured group from Iran (Brill 1995), a Khurasan Province glass. A high-Ti glass was detected with no known historic comparative, but it aligns relatively well with well-known Eastern Mediterranean glasses (Henderson, McLoughlin, and McPhail 2004; Freestone 2002; Freestone, Gorin-Rosen and Hughes 2000). The remainder were a very-high-Al glass with similarities to groups analysed from Merv, Turkmenistan (Meek, Schibille and Simpson in prep) and Duldur-Aqur, north-west China (Brill 1999), thought to have originated in the Transoxiana region of Central Asia.

There is a clear correlation between twisted subvarieties and chemical signatures, and also a link with colours that needs further investigation. All polychrome marvered and protruding designs are of Khurasan Province glass, whereas those of an Eastern Mediterranean or Central Asian signature are more uniformly dark or green.

### A mirror on society?

This is a promising result from the initial case study but, for the overall aims and objectives of the PhD, this needs to be applied to further collections. However, it does set the precedent of a successful approach for future studies to build upon. It is also anticipated that the study will aid in our wider understanding of the significance of bangle colours and styles, which may provide new interpretations into their value, regional tastes and cultural identity across the Islamic World.

### Acknowledgements

Acknowledgement must be given to Dr Nadine Schibille, who undertook additional LA-ICP-MS analysis on the collection for the project, and to the Collaborative Doctoral Award (CDA) scheme, funded by the Arts and Humanities Research Council (AHRC), part of UK Research and Innovation (UKRI).



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Charlotte is a current CDA PhD student at the University of Kent and the British Museum. Her PhD research is entitled 'Exploring economy, society and culture through glass bangles: Origins, circulation and cultural impact in the Western Indian Ocean from the 13th–18th centuries CE'. Primary supervisors are Prof Ellen Swift of the University of Kent and Dr Andrew Meek of the Science Department at the British Museum. Regular updates on this project can be found at <https://britishmuseum.academia.edu/CharlotteNash> and [www.researchgate.net/profile/Charlotte\\_Nash5](http://www.researchgate.net/profile/Charlotte_Nash5)



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